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# University of Colorado

## BULLETIN

Volume 10 - Number 1

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BOULDER, COLORADO, MARCH, 1910

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Published Quarterly by the Regents of the University of Colorado  
*Entered at the Post Office, Boulder, Colorado, as second-class mail matter*



CATALOGUE, 1909-1910





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CATALOGUE, 1909-1910

112

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*The*  
University of Colorado  
*Catalogue, 1909-1910*

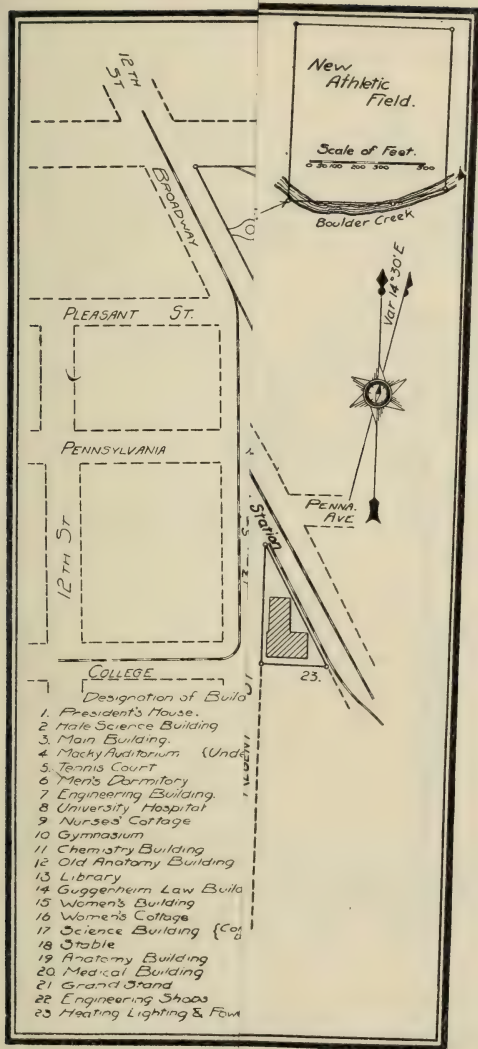
*With*  
Announcements for  
1910-1911



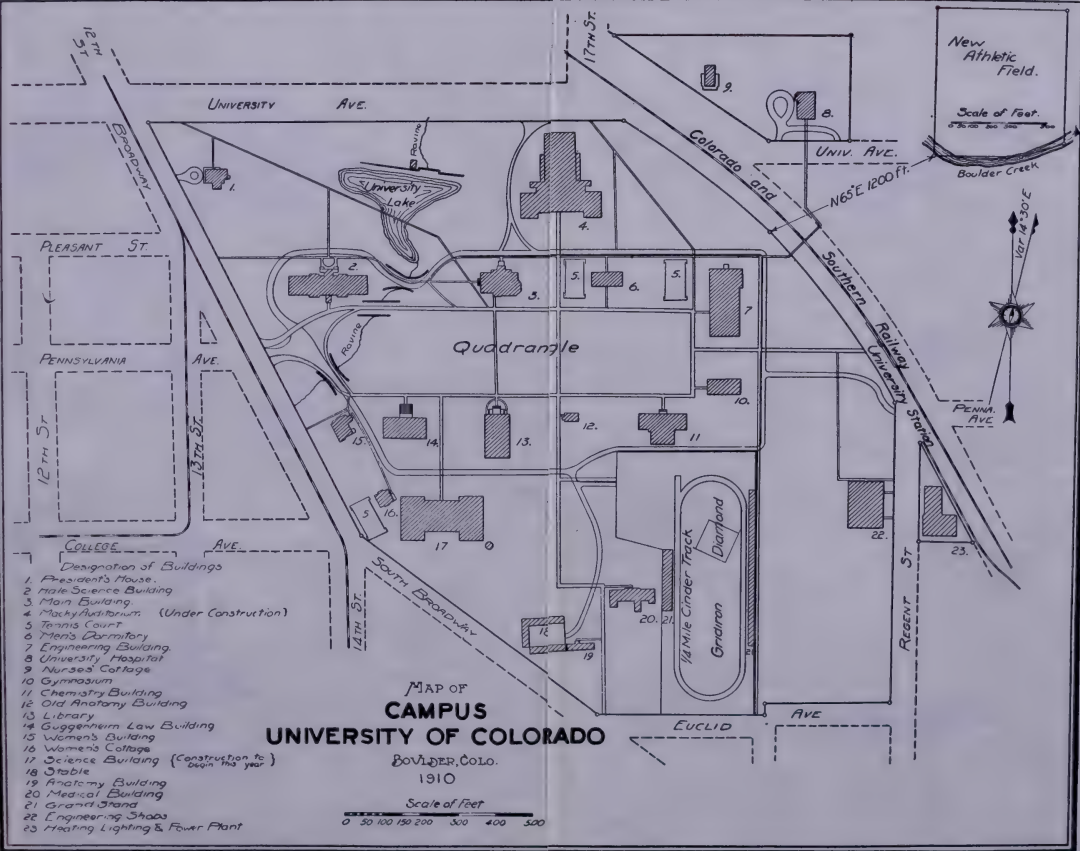
*Boulder, Colorado, March, 1910*

*msy*











1910

## CALENDAR

1910

|      | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |      | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |       | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |
|------|------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|-------|------|------|-------|------|-------|------|------|
| Jan. | 2    | 3    | 4     | 5    | 6     | 7    | 8    | May  | 1    | 2    | 3     | 4    | 5     | 6    | 7    | Sept. | 4    | 5    | 6     | 7    | 8     | 9    | 10   |
|      | 9    | 10   | 11    | 12   | 13    | 14   | 15   |      | 15   | 16   | 17    | 18   | 19    | 20   | 21   |       | 11   | 12   | 13    | 14   | 15    | 16   | 17   |
|      | 16   | 17   | 18    | 19   | 20    | 21   | 22   |      | 22   | 23   | 24    | 25   | 26    | 27   | 28   |       | 18   | 19   | 20    | 21   | 22    | 23   | 24   |
|      | 23   | 24   | 25    | 26   | 27    | 28   | 29   |      | 29   | 30   | 31    |      |       |      |      |       | 25   | 26   | 27    | 28   | 29    | 30   |      |
|      | 30   | 31   |       |      |       |      |      |      |      |      |       |      |       |      |      |       |      |      |       |      |       |      |      |
| Feb. | 6    | 7    | 8     | 9    | 10    | 11   | 12   | June | 5    | 6    | 7     | 8    | 9     | 10   | 11   | Oct.  | 2    | 3    | 4     | 5    | 6     | 7    | 8    |
|      | 13   | 14   | 15    | 16   | 17    | 18   | 19   |      | 12   | 13   | 14    | 15   | 16    | 17   | 18   |       | 9    | 10   | 11    | 12   | 13    | 14   | 15   |
|      | 20   | 21   | 22    | 23   | 24    | 25   | 26   |      | 19   | 20   | 21    | 22   | 23    | 24   | 25   |       | 16   | 17   | 18    | 19   | 20    | 21   | 22   |
|      | 27   | 28   |       |      |       |      |      |      | 26   | 27   | 28    | 29   | 30    |      |      |       | 23   | 24   | 25    | 26   | 27    | 28   | 29   |
|      |      |      |       |      |       |      |      |      |      |      |       |      |       |      |      |       | 30   | 31   |       |      |       |      |      |
| Mar. | 6    | 7    | 8     | 9    | 10    | 11   | 12   | July | 3    | 4    | 5     | 6    | 7     | 8    | 9    | Nov.  | 6    | 7    | 8     | 9    | 10    | 11   | 12   |
|      | 13   | 14   | 15    | 16   | 17    | 18   | 19   |      | 10   | 11   | 12    | 13   | 14    | 15   | 16   |       | 13   | 14   | 15    | 16   | 17    | 18   | 19   |
|      | 20   | 21   | 22    | 23   | 24    | 25   | 26   |      | 17   | 18   | 19    | 20   | 21    | 22   | 23   |       | 20   | 21   | 22    | 23   | 24    | 25   | 26   |
|      | 27   | 28   | 29    | 30   | 31    |      |      |      | 24   | 25   | 26    | 27   | 28    | 29   | 30   |       | 27   | 28   | 29    | 30   |       |      |      |
|      |      |      |       |      |       |      |      |      | 31   |      |       |      |       |      |      |       |      |      |       |      |       |      |      |
| Apr. | 3    | 4    | 5     | 6    | 7     | 8    | 9    | Aug. | 7    | 8    | 9     | 10   | 11    | 12   | 13   | Dec.  | 4    | 5    | 6     | 7    | 8     | 9    | 10   |
|      | 10   | 11   | 12    | 13   | 14    | 15   | 16   |      | 14   | 15   | 16    | 17   | 18    | 19   | 20   |       | 11   | 12   | 13    | 14   | 15    | 16   | 17   |
|      | 17   | 18   | 19    | 20   | 21    | 22   | 23   |      | 21   | 22   | 23    | 24   | 25    | 26   | 27   |       | 18   | 19   | 20    | 21   | 22    | 23   | 24   |
|      | 24   | 25   | 26    | 27   | 28    | 29   | 30   |      | 28   | 29   | 30    | 31   |       |      |      |       | 25   | 26   | 27    | 28   | 29    | 30   | 31   |
|      |      |      |       |      |       |      |      |      |      |      |       |      |       |      |      |       |      |      |       |      |       |      |      |

1911

## CALENDAR

1911

|      | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |      | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |       | Sun. | Mon. | Tues. | Wed. | Thur. | Fri. | Sat. |
|------|------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|-------|------|------|-------|------|-------|------|------|
| Jan. | 1    | 2    | 3     | 4    | 5     | 6    | 7    | May  | 7    | 8    | 9     | 10   | 11    | 12   | 13   | Sept. | 3    | 4    | 5     | 6    | 7     | 8    | 9    |
|      | 8    | 9    | 10    | 11   | 12    | 13   | 14   |      | 14   | 15   | 16    | 17   | 18    | 19   | 20   |       | 10   | 11   | 12    | 13   | 14    | 15   | 16   |
|      | 15   | 16   | 17    | 18   | 19    | 20   | 21   |      | 21   | 22   | 23    | 24   | 25    | 26   | 27   |       | 17   | 18   | 19    | 20   | 21    | 22   | 23   |
|      | 22   | 23   | 24    | 25   | 26    | 27   | 28   |      | 28   | 29   | 30    | 31   |       |      |      |       | 24   | 25   | 26    | 27   | 28    | 29   | 30   |
|      | 29   | 30   | 31    |      |       |      |      |      |      |      |       |      |       |      |      |       |      |      |       |      |       |      |      |
| Feb. | 5    | 6    | 7     | 8    | 9     | 10   | 11   | June | 4    | 5    | 6     | 7    | 8     | 9    | 10   | Oct.  | 1    | 2    | 3     | 4    | 5     | 6    | 7    |
|      | 12   | 13   | 14    | 15   | 16    | 17   | 18   |      | 11   | 12   | 13    | 14   | 15    | 16   | 17   |       | 8    | 9    | 10    | 11   | 12    | 13   | 14   |
|      | 19   | 20   | 21    | 22   | 23    | 24   | 25   |      | 18   | 19   | 20    | 21   | 22    | 23   | 24   |       | 22   | 23   | 24    | 25   | 26    | 27   | 28   |
|      | 26   | 27   | 28    |      |       |      |      |      | 25   | 26   | 27    | 28   | 29    | 30   |      |       | 29   | 30   | 31    |      |       |      |      |
|      |      |      |       |      |       |      |      |      |      |      |       |      |       |      |      |       |      |      |       |      |       |      |      |
| Mar. | 5    | 6    | 7     | 8    | 9     | 10   | 11   | July | 2    | 3    | 4     | 5    | 6     | 7    | 8    | Nov.  | 5    | 6    | 7     | 8    | 9     | 10   | 11   |
|      | 12   | 13   | 14    | 15   | 16    | 17   | 18   |      | 9    | 10   | 11    | 12   | 13    | 14   | 15   |       | 12   | 13   | 14    | 15   | 16    | 17   | 18   |
|      | 19   | 20   | 21    | 22   | 23    | 24   | 25   |      | 16   | 17   | 18    | 19   | 20    | 21   | 22   |       | 19   | 20   | 21    | 22   | 23    | 24   | 25   |
|      | 26   | 27   | 28    | 29   | 30    | 31   |      |      | 23   | 24   | 25    | 26   | 27    | 28   | 29   |       | 26   | 27   | 28    | 29   | 30    |      |      |
|      |      |      |       |      |       |      |      |      | 30   | 31   |       |      |       |      |      |       |      |      |       |      |       |      |      |
| Apr. | 2    | 3    | 4     | 5    | 6     | 7    | 8    | Aug. | 6    | 7    | 8     | 9    | 10    | 11   | 12   | Dec.  | 3    | 4    | 5     | 6    | 7     | 8    | 9    |
|      | 9    | 10   | 11    | 12   | 13    | 14   | 15   |      | 13   | 14   | 15    | 16   | 17    | 18   | 19   |       | 10   | 11   | 12    | 13   | 14    | 15   | 16   |
|      | 16   | 17   | 18    | 19   | 20    | 21   | 22   |      | 20   | 21   | 22    | 23   | 24    | 25   | 26   |       | 17   | 18   | 19    | 20   | 21    | 22   | 23   |
|      | 23   | 24   | 25    | 26   | 27    | 28   | 29   |      | 27   | 28   | 29    | 30   | 31    |      |      |       | 24   | 25   | 26    | 27   | 28    | 29   | 30   |
|      | 30   |      |       |      |       |      |      |      |      |      |       |      |       |      |      |       | 31   |      |       |      |       |      |      |



# ANNOUNCEMENTS

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1910.

- Jan. 19, Wednesday.....Meeting of Board of Regents.  
Jan. 31, Monday.....Second Semester begins.  
Feb. 12, Saturday.....Lincoln's Birthday.  
Feb. 22, Tuesday.....Washington's Birthday (Holiday).  
March 26, Saturday, to  
April 3, Sunday.....Spring Recess.  
April 15, Friday.....Arbor Day (Holiday).  
Giffin Prize Debate.  
April 20, Wednesday....Meeting of Board of Regents.  
May 14, Saturday.....High-School Day.  
May 30, Monday.....Decoration Day (Holiday).  
June 3, Friday.....All examinations completed.  
June 4, Saturday.....Phi Beta Kappa Exercises.  
Sigma Xi Exercises.  
June 5, Sunday.....Baccalaureate Address.  
Annual Address before the Christian  
Associations.  
June 6, Monday.....Senior Class Play.  
June 7, Tuesday.....Meeting of Board of Regents.  
Class Day Exercises and Parade.  
President's Reception.  
Alumni Exercises and Reception.  
Senior Promenade.  
June 8, Wednesday.....Commencement.  
Alumni Banquet.  
June 9, Thursday.....Summer Vacation begins.  
June 20 to July 30.....Summer School.  
Sept. 7, Wednesday.....Meeting of Board of Regents.

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## ACADEMIC YEAR, 1910-1911

- Sept. 12, Monday.....First Semester begins; Assembly of Students  
at 11:00; Examinations and Presentation of  
Certificates; Registration; (Registration be-  
gins Friday, Sept. 9).
- Oct. 12, Wednesday.....Columbus Day (Holiday).
- Nov. 9, Wednesday.....Meeting of Board of Regents.
- Nov. 19, Saturday, to
- Nov. 27, Sunday.....Thanksgiving Recess.
- Dec. 24, Saturday, to
- Jan. 1, Sunday.....Winter Recess.  
1911.
- Jan. 18, Wednesday.....Meeting of Board of Regents.
- Jan. 30, Monday.....Second Semester begins.
- Feb. 12, Sunday.....Lincoln's Birthday.
- Feb. 22, Wednesday.....Washington's Birthday (Holiday).
- March 25, Saturday, to
- April 2, Sunday.....Spring Recess.
- April 19, Wednesday....Meeting of Board of Regents.
- April 21, Friday.....Arbor Day (Holiday).  
Giffin Prize Debate.
- May 13, Saturday.....High-School Day.
- May 30, Tuesday.....Decoration Day (Holiday).
- June 2, Friday.....All examinations completed.
- June 3, Saturday.....Phi Beta Kappa Exercises.  
Sigma Xi Exercises.
- June 4, Sunday.....Baccalaureate Address.  
Annual Address before the Christian  
Associations.
- June 5, Monday.....Senior Class Play.
- June 6, Tuesday.....Meeting of Board of Regents.  
Class Day Exercises and Parade.  
President's Reception.  
Alumni Exercises and Reception.  
Senior Promenade.

June 7, Wednesday.....Commencement.

Alumni Banquet.

June 8, Thursday.....Summer Vacation begins.

June 19 to July 29.....Summer School.

Sept. 6, Wednesday.....Meeting of Board of Regents.



## BOARD OF REGENTS

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|                                |                      |
|--------------------------------|----------------------|
| HAROLD D. THOMPSON, B.A.....   | <i>Cripple Creek</i> |
| Term expires, 1910.            |                      |
| THOMAS D. BAIRD, M.D.....      | <i>Walsenburg</i>    |
| Term expires, 1910.            |                      |
| CHARLES R. DUDLEY, LL.B.....   | <i>Denver</i>        |
| Term expires, 1912.            |                      |
| JOSEPH C. BELL, LL.B.....      | <i>Trinidad</i>      |
| Term expires, 1912.            |                      |
| RALPH TALBOT, B.A. ....        | <i>Denver</i>        |
| Term expires, 1914.            |                      |
| ETHELBERT B. ADAMS, LL.B. .... | <i>Telluride</i>     |
| Term expires, 1914.            |                      |

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## OFFICERS OF THE BOARD

|                         |         |           |
|-------------------------|---------|-----------|
| JAMES H. BAKER.....     | Boulder | President |
| FRANK H. WOLCOTT.....   | Boulder | Secretary |
| WILLIAM H. ALLISON..... | Boulder | Treasurer |

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## COMMITTEES OF THE BOARD

|                                                       |
|-------------------------------------------------------|
| EXECUTIVE—Messrs. Baird, Thompson, Baker.             |
| AUDITING—Messrs. Talbot, Dudley, Baker.               |
| BUILDINGS AND GROUNDS—Messrs. Thompson, Baird, Baker. |
| FINANCE—Messrs. Dudley, Bell.                         |
| LIBRARY—Messrs. Adams, Bell, Barnes.                  |
| INSTRUCTORS—Messrs. Baker, Dudley, Talbot.            |

## \*ADVISORY BOARD

|                               | Town.                   | County.            |
|-------------------------------|-------------------------|--------------------|
| GEORGE A. GARARD.....         | <i>Brighton</i>         | <i>Adams</i>       |
| †THOMAS F. WALSH.....         | <i>Littleton</i>        | <i>Arapahoe</i>    |
| ALLEN J. NOSSAMAN, M.D.....   | <i>Pagosa Springs</i>   | <i>Archuleta</i>   |
| WILLIAM HOOKER .....          | <i>Springfield</i>      | <i>Baca</i>        |
| HARRY L. LUBERS.....          | <i>Las Animas</i>       | <i>Bent</i>        |
| THOMAS BUTLER .....           | <i>Longmont</i>         | <i>Boulder</i>     |
| GEORGE H. CURFMAN, M.D.....   | <i>Salida</i>           | <i>Chaffee</i>     |
| E. P. HICKMAN.....            | <i>Cheyenne Wells</i>   | <i>Cheyenne</i>    |
| WILLIAM C. HOOD.....          | <i>Georgetown</i>       | <i>Clear Creek</i> |
| ALBERT A. STOVER.....         | <i>Idaho Springs</i>    | <i>Clear Creek</i> |
| FREDERICK W. SWANSON.....     | <i>Alamosa</i>          | <i>Conejos</i>     |
| CHARLES GROENENDYKE .....     | <i>San Luis</i>         | <i>Costilla</i>    |
| JOHN H. LEARY.....            | <i>Westcliffe</i>       | <i>Custer</i>      |
| BURTON P. SMITH.....          | <i>Delta</i>            | <i>Delta</i>       |
| GUSTAVE C. BARTELS.....       | <i>Denver</i>           | <i>Denver</i>      |
| WILLIAM H. BRYANT.....        | <i>Denver</i>           | <i>Denver</i>      |
| CHARLES L. DICKERSON.....     | <i>Denver</i>           | <i>Denver</i>      |
| CLAYTON C. DORSEY.....        | <i>Denver</i>           | <i>Denver</i>      |
| IRVING HALE .....             | <i>Denver</i>           | <i>Denver</i>      |
| HORACE N. HAWKINS.....        | <i>Denver</i>           | <i>Denver</i>      |
| A. DUPONT PARKER.....         | <i>Denver</i>           | <i>Denver</i>      |
| FRANK E. SHEPARD.....         | <i>Denver</i>           | <i>Denver</i>      |
| JOHN W. SPRINGER.....         | <i>Denver</i>           | <i>Denver</i>      |
| THOMAS B. STEARNS.....        | <i>Denver</i>           | <i>Denver</i>      |
| CHARLES MACALLISTER WILLCOX.. | <i>Denver</i>           | <i>Denver</i>      |
| JOHN ANDERSON .....           | <i>Castle Rock</i>      | <i>Douglas</i>     |
| JAMES DILTS .....             | <i>Eagle</i>            | <i>Eagle</i>       |
| WILLIAM D. REILLY.....        | <i>Kiowa</i>            | <i>Elbert</i>      |
| JOSEPH F. HUMPHREY.....       | <i>Colorado Springs</i> | <i>El Paso</i>     |
| ROBERT KERR .....             | <i>Colorado Springs</i> | <i>El Paso</i>     |
| CLYDE C. DAWSON.....          | <i>Canon City</i>       | <i>Fremont</i>     |
| JAMES G. JOHNSTON.....        | <i>Florence</i>         | <i>Fremont</i>     |

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\* The members of the Advisory Board are appointed by the Regents for a term of one year. The service is without compensation. Annual meeting of the Advisory Board, at the University, Tuesday and Wednesday of Commencement Week.

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† Deceased.

|                               | Town.             | County.    |
|-------------------------------|-------------------|------------|
| BARNETTE T. NAPIER.....       | Glenwood Springs  | Garfield   |
| CHASE WITHROW .....           | Central City      | Gilpin     |
| DAVID P. HOWARD.....          | Sulphur Springs   | Grand      |
| JOHN A. LEHRITTER.....        | Gunnison          | Gunnison   |
| BENJAMIN F. CUMMINGS, M.D.... | Lake City         | Hinsdale   |
| CHARLES HAYDEN .....          | Walsenburg        | Huerfano   |
| OWEN S. CASE.....             | Walden            | Jackson    |
| WILLIAM G. SMITH.....         | Golden            | Jefferson  |
| RAYMOND MILLER .....          | Galatea           | Kiowa      |
| WILLIAM D. SELDER.....        | Burlington        | Kit Carson |
| CHARLES CAVENDER .....        | Leadville         | Lake       |
| CHARLES A. PIKE.....          | Durango           | La Plata   |
| FRANK J. ANNIS.....           | Fort Collins      | Larimer    |
| EDWARD H. DAY.....            | Trinidad          | Las Animas |
| ARCHIBALD MCINTYRE .....      | Hugo              | Lincoln    |
| WILLIAM L. HAYS.....          | Sterling          | Logan      |
| HORACE T. DELONG.....         | Grand Junction    | Mesa       |
| ALBERT L. MOSES.....          | Creede            | Mineral    |
| LEONARD H. CLARK, M.D.....    | Montezuma         | Mancos     |
| ABIJAH JOHNSON, M.D.....      | Montrose          | Montrose   |
| MONCELLUS L. MORE.....        | Fort Morgan       | Morgan     |
| ROBERT W. PATTERSON.....      | La Junta          | Otero      |
| WILLIAM W. ROWAN, M.D.....    | Ouray             | Ouray      |
| CHARLES A. WILKIN .....       | Fairplay          | Park       |
| R. G. MCKIBBEN.....           | Holyoke           | Phillips   |
| EWING C. GUTHRIE, M.D.....    | Aspen             | Pitkin     |
| JOHN C. HORN.....             | Lamar             | Prowers    |
| ALVA ADAMS .....              | Pueblo            | Pueblo     |
| HUME LEWIS .....              | Pueblo            | Pueblo     |
| JAMES LYTTLE .....            | Meeker            | Rio Blanco |
| ROBERT G. BRECKENRIDGE .....  | Monte Vista       | Rio Grande |
| BENJAMIN F. NIESZ.....        | Steamboat Springs | Routt      |
| WILLIAM J. KING.....          | Villa Grove       | Saguache   |
| CLARENCE O. FINCH .....       | Silverton         | San Juan   |
| STEPHEN A. BAILEY .....       | Telluride         | San Miguel |
| BERTRAND D. PARKER, JR.....   | Julesburg         | Sedgwick   |
| WILLIAM F. FORMAN .....       | Breckenridge      | Summit     |
| GRIFFITH R. LEWIS.....        | Cripple Creek     | Teller     |
| NELSON FRANKLIN .....         | Victor            | Teller     |



|                        | Town.          | County.           |
|------------------------|----------------|-------------------|
| EGBERT MORE .....      | <i>Akron</i>   | <i>Washington</i> |
| GEORGE D. STATLER..... | <i>Greeley</i> | <i>Weld</i>       |
| THOMAS B. GROVES.....  | <i>Wray</i>    | <i>Yuma</i>       |

# COLLEGES AND SCHOOLS OF THE UNIVERSITY

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The Colleges and Schools of the UNIVERSITY OF COLORADO are the following:

- I. COLLEGE OF LIBERAL ARTS:  
Courses leading to the degree B.A.
- II. COLLEGE OF COMMERCE:  
Courses leading to the degree B.A. and special certificate.
- III. COLLEGE OF EDUCATION:  
Courses leading to the degree B.A. and special certificate.
- IV. GRADUATE SCHOOL, leading to the degrees M.A. and Ph.D.; also  
M.S., C.E., E.E., M.E.
- V. COLLEGE OF ENGINEERING:  
*Civil Engineering*, leading to the degree B.S. (C.E.).  
*Electrical Engineering*, leading to the degree B.S. (E.E.).  
*Mechanical Engineering*, leading to the degree B.S. (M.E.).  
*Chemical Engineering*, leading to the degree B.S. (Ch.E.).
- VI. SCHOOL OF MEDICINE, leading to the degree M.D.
- VII. SCHOOL OF LAW, leading to the degree LL.B.
- VIII. SUMMER SCHOOL.

## \*GENERAL FACULTY

---

JAMES H. BAKER, M.A., LL.D., President.

J. RAYMOND BRACKETT, Ph.D.,  
Dean of the Graduate School; Professor of Comparative and  
English Literature.

LUMAN M. GIFFIN, M.D.,  
Professor of Surgery.

IRA M. DELONG, M.A.,  
Professor of Mathematics.

MOSES HALLETT, LL.D.,  
Dean of the Law School and Professor of American Constitutional  
Law, *Emeritus*.

JOHN CHASE, B.A., M.D.,  
Professor of Ophthalmology and Otology.

THOMAS E. TAYLOR, B.A., M.D.,  
Professor of Obstetrics.

ALBERT A. REED, LL.B.,  
Professor of Law.

WILLIAM B. CRAIG, M.D.,  
Professor of Surgery.

E. BARBER QUEAL, M.D.,  
Professor of Physiology.

†FRED B. R. HELLEMS, Ph.D.,  
Dean of the College of Liberal Arts; Professor of Latin.

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\* Professors, Assistant Professors, Lecturers and Instructors are arranged in the order of appointment. Assistants rank as their departments. Within the General Faculty are organized the Advisory Council, Senate, and Faculties of the several colleges and schools.

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† On leave of absence, 1909-1910.

GEORGE H. CATTERMOLLE, M.D.,  
Professor of Medicine (Pediatrics).

CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

FRANK E. WAXHAM, M.D.,  
Professor of Rhinology and Laryngology.

WILLIAM H. BRYANT, B.S., LL.B.,  
Professor of Law.

GEORGE NORLIN, Ph.D.,  
Professor of Greek.

FRANCIS RAMALEY, Ph.D.,  
Professor of Biology.

CHARLES FISHER ANDREW, M. D.,  
Professor of Materia Medica and Therapeutics.

CHARLES S. ELDER, M.D.,  
Professor of Surgery (Gynecology).

NEWTON WIEST, M.D.,  
Professor of Dermatology.

EDWIN VAN CISE,  
Professor of Law.

MELANCHTHON F. LIBBY, Ph.D.,  
Professor of Philosophy.

JOHN B. PHILLIPS, Ph.D.,  
Secretary of the College of Commerce; Professor of Economics and  
Sociology.

WILLIAM H. PEASE, B.A., LL.B.,  
Professor of Law.

\*JOHN BERNARD EKELEY, Ph.D.,  
Professor of Chemistry.

WALTER RUNGE, Ph.D.,  
Acting Professor of Chemistry.

JOHN CAMPBELL, M.A., LL.B., LL.D.,  
Dean of the Law School, *Emeritus*; Professor of Law of Private and  
Municipal Corporations.

---

\* On leave of absence, 1909-1910.



RUSSELL D. GEORGE, M.A.,  
Professor of Geology.

JOHN D. FLEMING, B.A., LL.B.,  
Dean of the Law School; Professor of Law; Associate Judge of  
Practice Court.

JAMES R. ARNEILL, B.A., M.D.,  
Professor of Medicine (Clinical Medicine).

\*MILO S. KETCHUM, C.E.,  
Dean of the College of Engineering; Professor of Civil Engineering.

CLEMENT C. WILLIAMS, C.E.,  
Acting Professor of Civil Engineering.

RICHARD W. CORWIN, M.D., LL.D.,  
Professor of Surgery.

CHARLES B. LYMAN, M.D.,  
Professor of Surgery.

JOHN M. FOSTER, M.D.,  
Professor of Otology.

• EDWARD JACKSON, M.A., M.D.;  
Professor of Ophthalmology.

HERBERT S. EVANS, E.E.,  
Acting Dean of the College of Engineering; Professor of Electrical  
Engineering.

JOHN A. HUNTER, M.E.,  
Professor of Mechanical Engineering.

CARROLL E. EDSON, M.A., M.D.,  
Professor of Medicine (Theory and Practice).

THEODORE D. A. COCKERELL,  
Professor of Systematic Zoology.

WILLIAM PAGE HARLOW, B.A., M.D.,  
Dean of the Medical School.

GEORGE M. CHADWICK,  
Professor of Music.

JAMES F. WILLARD, Ph.D.,  
Professor of History.

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\* On leave of absence, 1909-1910.

VIVIAN A. C. HENMON, Ph.D.,

Acting Dean of the College of Liberal Arts; Professor of Psychology and Education.

OLIVER C. LESTER, Ph.D.,

Professor of Physics.

FRANK E. THOMPSON, B.A.,

Secretary of the College of Education; Professor of Education.

EDWARD F. DEAN, M.D.,

Professor of Anatomy.

ROSS C. WHITMAN, B.A., M.D.,

Secretary of the Medical School; Professor of Pathology.

JUNIUS HENDERSON, B.A.,

Professor of Natural History; Curator of Museum.

JOHN S. MCLUCAS, M.A.,

Professor of English.

GRACE FLEMING VAN SWERINGEN, Ph.D.,

Professor of German.

OSCAR M. GILBERT, M.D.,

Professor of Medicine (Clinical Medicine).

ALVIN R. PEEBLES, M.D.,

Professor of Medicine (Therapeutics).

CLOUGH T. BURNETT, M.D.,

Professor of Bacteriology.

MILO G. DERHAM, Ph.D.,

Assistant Professor of Latin; Acting Professor.

ARTHUR L. KENNEDY, M.D.,

Assistant Professor of Medicine.

SAUL EPSTEEN, Ph.D.,

Secretary of the Graduate School; Assistant Professor of Engineering Mathematics.

RALPH D. CRAWFORD, M.A.,

Assistant Professor of Geology.

DAVID R. JENKINS, E.E.,

Assistant Professor of Electrical Engineering.

MARTHA G. MCCAULLEY, M.A.,

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ROBERT S. MORRISON,

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CHARLES S. THOMAS, LL.B.,

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LUCIUS M. CUTHBERT, M.A., LL.B.,

Lecturer on Roman Law.

JOHN A. RINER, LL.B.,

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JAMES W. MCCREERY,

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JOHN E. ROBINSON,

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GEORGE E. NEUHAUS, M.D.,

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OLIVER LYONS, M.D.,

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CHARLES B. DYKE, M.A.,

Instructor in Education.

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WALTER W. REED, M.D.,  
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WILLIAM A. JOLLEY, M.D.,  
Instructor in Pharmacology.

WILLARD J. WHITE, M.A., M.D.,  
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JACOB CAMPBELL, M.D.,  
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HENRY A. HARTMAN, Ph.D.,  
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JOHN ANDREW, B.A., M.D.,  
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ARTHUR L. TATUM, M.S.,  
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FRANK R. SPENCER, B.A., M.D.,  
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Instructor in Hebrew.

MARGARET S. CARHART, M.A.,  
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JOSEPH L. KINGSBURY, B.A.,  
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Assistant in Comparative and English Literature.

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LOUISE FALK, B.A.,  
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JOHN E. GUTBERLET, B.A.,  
Assistant in Biology.

RALPH L. CARR,  
Assistant in Philosophy.

EARL B. MILLARD,  
Assistant in Chemistry.

GEORGE B. PACKARD,  
Assistant in Chemistry.

CHARLES F. POE,  
Chemistry Stock Room.

HORACE A. HOLLADAY,  
Chemistry Stock Room.

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MARY E. LAKENAN,  
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FERD J. LOCKHART,  
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BESSIE BAKER, B.S.,  
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AMMY B. EDGAR,  
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WILLIAM OTIS CALLAWAY,  
Assistant in Bacteriology.

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WALTER L. BARNES, Ph.B.,  
Librarian in Charge.

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Assistant Librarian.

JENNIE B. RITCHIE,  
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C. BELMONT PRESTON,  
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JACOB C. PRESTON,  
Assistant in Library.

A. ELMER STIRRETT,  
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WILLIAM B. WALDO,  
Assistant in Law Library.

OLIVER C. WILSON,  
Assistant in Law Library.

FRANK R. CASTLEMAN, B.S.,  
Director of Physical Training and Athletics.

EARL E. WRIGHT,  
Assistant in Gymnasium.

MARGARET L. JOHNSON, M.D.,  
Physical Examiner for Women in Gymnasium.

FRED E. HAGEN, B.A.,  
Secretary and Registrar.

RALPH G. GRABILL,  
Assistant Secretary.

JOSEPH KLEMME,  
Steward.



# GENERAL STATEMENT

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## ESTABLISHMENT

The Constitution of the State of Colorado provides for the election, by the people at large, of a Board of Regents of the State University, and defines its duties as follows: "*The Board of Regents shall have the general supervision of the University, and the exclusive control and direction of all funds of, and appropriations to, the University.*" The President of the University is *ex officio* a member of the Board of Regents and its presiding officer. The laws for the government of the University and providing for its maintenance were passed by the General Assembly of Colorado, March 15, 1877. Its object, as defined by that act, is, "*To provide the best and most efficient means of imparting to young men and women, on equal terms, a liberal education and thorough knowledge of the different branches of literature, the arts and sciences, with their varied applications.*"

## HISTORY

The University of Colorado was incorporated by an act of the Territorial Legislature of 1861, and the location fixed at Boulder. In 1871 three public-spirited citizens gave the University fifty-two acres of land adjoining the city. In 1874, the Territorial Legislature appropriated \$15,000, and the citizens of Boulder contributed a like sum in cash. In 1875 Congress set apart and reserved seventy-two sections of the public lands for the support of the State University. In 1876 the Constitution of Colorado provided that upon its adoption the University at Boulder should become an institution of the State, thus entitling it to lands appropriated by Congress, and further made provision for the management and control of the University. The first General Assembly of the State provided for its permanent support by the levy of a tax of one-fifth of a mill upon the property of the State; also, for a fund to be

secured by the sale of lands granted by the United States. In 1903, the General Assembly increased the annual levy from one-fifth to two-fifths of a mill.

The Institution was opened September, 1877, with two departments, Preparatory and College. The Medical School was opened in 1883. In September, 1892, a Law School was established, Graduate courses were first formally offered, and the gradual withdrawal of the Preparatory classes from the University was begun. The College of Engineering was opened in 1893. The Summer School was established in 1904. In September, 1906, a College of Commerce was established. The Preparatory School was discontinued in 1907. The Department of Education was organized as a College of Education in 1908.

The University is supported by the proceeds from a two-fifths mill tax, and by special appropriations.

## LOCATION

The University is located at Boulder, a thriving city of twelve thousand inhabitants, about thirty miles north from Denver. The campus is situated on an elevation on the south side of the city and commands to the east a fine view of Boulder Valley, dotted with numerous small lakes, a rich agricultural and fruit-raising district. To the west a mile distant are the foothills, the boldest and highest of the range, and beyond is seen the ever snow-capped summit of Arapahoe Peak. In the canons and along the mountain roads, the scenery is grand and beautiful. To the north is Long's Peak, rising nearly fifteen thousand feet above sea level, while to the south is a series of beautiful mesas extending from the foothills. A trip on the Denver, Boulder & Western Railroad, extending thirty miles into the mountains, is a favorite excursion for tourists. The healthfulness of the climate of Colorado is well known. The city is located on that plateau east of the Rocky Mountains which, as recently stated in the *Journal of Outdoor Life*, "has the finest climate in the world." The dry air and almost continuous succession of bright, cloudless days make Boulder a very desirable location for residence. Many young men and women who have been compelled to leave college both in the East and South on account of ill health, are able to pursue their studies here without interruption. The altitude of Boulder is 5,335 feet above sea level.

## CHAUTAUQUA

The Colorado Chautauqua is located in Boulder. The thirteenth session will open July 4 and continue until August 14. A summer school is connected with the Chautauqua. Lecturers and instructors of national reputation are employed. The previous sessions have been remarkably successful in point of attendance and excellence of programme. The secretary is Mr. F. A. Boguess, Boulder, Colo.

## BUILDINGS

**HEATING, LIGHTING AND POWER PLANT**—A new plant, furnishing heat, light and power for the campus has been recently finished east of the Shops Building. It contains a boiler room forty by seventy-four feet and an engine room fifty by eighty-six feet. The structure is built of stone. A concrete tunnel 1,700 feet in length has been built from the power plant to distributing points on the campus. This tunnel contains all pipes and wires necessary for heating, lighting and power purposes.

**MACKY AUDITORIUM**—Work has been begun on the Macky Auditorium. The funds for the erection of this building were provided by the will of the late Andrew J. Macky. The building will be two hundred and thirty-four feet by two hundred and sixty-four feet in plan. Stone with lighter stone trimmings will be used. The estimated cost of the building is nearly \$300,000. The main auditorium will seat 3,000 people and there will be three minor rooms in the wings for smaller audiences. The administrative offices will be located temporarily in one wing. The basement under the whole structure will be finished to accommodate large University and student functions.

**LIBRARY BUILDING**—The Library Building is a two-story structure, built of gray brick and white sandstone. The central portion is sixty-five by one hundred and fifteen feet. Two wings are to be added.

**WOODBURY HALL**—This building is three stories in height above the basement, and is constructed of gray and red sandstone. It is heated by steam and supplied with hot and cold water, bath rooms, etc.

The rooms are in suites of three rooms each—a sitting room for study, twelve by fourteen feet, and two bed rooms, each ten by twelve feet, with commodious closets.

**WOMAN'S BUILDING**—The Woman's Building is a two-story brick structure, containing the offices of the Dean of Women, the Woman's

League and the Young Women's Christian Association. There are also a large club room and a kitchen. The upper floor contains twelve bedrooms.

**WOMAN'S COTTAGE**—This is a two-story brick building, containing twelve rooms.

**GYMNASIUM**—The Gymnasium Building is of such dimensions that it may be used on occasions as a general assembly hall. The building is well heated, ventilated and lighted, and contains a large exercise room, dressing rooms, shower baths, lockers, etc. It is equipped with the usual appliances.

**PRESIDENT'S HOUSE**—This is a two-story brick house of ten rooms.

**MAIN BUILDING**—The Main Building is a four-story brick structure, containing lecture and recitation rooms for the College of Liberal Arts, the administrative offices, the auditorium, and the art rooms.

**OLD ANATOMY BUILDING**—This building is a two-story brick structure used by the College of Liberal Arts.

**HALE SCIENCE BUILDING**—The Hale Science Building is a four-story building of stone, sixty by one hundred feet in plan, with two wings, each fifty-one by fifty-two feet in area and two stories high. The wings have just been completed. The second or main floor in the wings contains two lecture rooms each with a seating capacity of over two hundred students. The entire lower story is occupied by the physics department; the second story of the central part by the mathematical and romance languages departments; the third by the biological and zoological departments; the fourth by the geological department.

**CHEMISTRY BUILDING**—The Chemistry Building is constructed of red pressed brick, trimmed with red sandstone, and contains two stories and a basement. It is forty by one hundred and twenty-five feet in plan with a wing forty by sixty feet.

**PROPOSED NEW SCIENCE AND MUSEUM BUILDING**—One wing of a Science and Museum Building will be erected during the year. The plan of the entire building is two hundred and twenty-five by one hundred and twenty-one feet. This is to be devoted to Geology, Biology, and the Museum.

**ENGINEERING BUILDING**—A two-story brick building with basement is devoted to the use of the College of Engineering. The building is



one hundred and seventy-seven by eighty-five feet in plan. It is designed with special reference to engineering work, and is well fitted with machinery and instruments.

**SHOPS BUILDING**—The Shops Building is located at the extreme east end of the campus, covering a space ninety-three by one hundred and twenty-two feet. It is built of red brick and sandstone. The first, or front section, is two stories, with wood shops on the first floor and drawing rooms on the second floor; the remaining portion is one-story, containing the machine shop, forge shop, and foundry. All the rooms are well lighted, heated, and ventilated, and the most modern construction is used throughout.

**MEDICAL BUILDING**—The Medical Building is a brick structure, consisting of a central portion and three wings. It contains lecture rooms and laboratories for pathology, bacteriology, practical physiology and pharmacology. There are also reception rooms and rooms for clinics. Adjoining is a temporary structure for anatomy.

**HOSPITAL**—The Hospital is a three-story brick building, situated on the bluff overlooking the creek, city and surrounding country. In plan and equipment it is in every way modern and complete.

**NURSES' HOME**—The Nurses' Home is a one-story frame cottage, situated west of the Hospital. It contains eight rooms, and is well adapted in every way to its purpose.

**GUGGENHEIM LAW BUILDING**—Donated by Senator Simon Guggenheim. This is a three-story building of gray brick and gray sandstone, one hundred and fifteen by fifty-two feet in plan, erected in 1909. It contains class rooms, offices, moot court room and library, and is planned exclusively for the School of Law.

## THE UNIVERSITY LIBRARY

The Library was founded by liberal cash donations for the purchase of books placed at the disposal of the University by Mr. Charles G. Buckingham, of Boulder. It now occupies the central portion of the new Library Building, which is provided with seminary rooms, alcoves for special study, and is in every respect adapted to the increasing activity of the library in University work. Two large wings will be added to the building. The Library contains 52,000 bound volumes, be-

sides a large number of unbound pamphlets; works of practical and permanent worth are being constantly added. The collection is a choice one, largely the selection of the faculty, whose aim has been to supply the various departments with a liberal equipment of practical working material. The building is open to all students and to the public as a reference library, every day, except Sunday, from 7:45 a. m. to 5:30 p.m., and from 7:00 to 10:00 in the evening throughout the academic year, except Friday and Saturday evenings when the closing hour is 9:00. A Librarian, two Assistant Librarians, and two student assistants are employed to care for the books and aid students and patrons in their proper use.

General, technical and professional libraries are classed as a unit by the decimal system of Mr. Dewey. All books are shelved in a continuous order of classification, while a relative location and alphabetical order are secured by use of the Cutter notation. Books are catalogued on the dictionary plan, in a single alphabet, by author, subject, and when of sufficient importance, by title. Upwards of 80,000 cards, with brief bibliography, and, in many instances, full analytical contents, with author and subject duplications, are accessible for student reference.

In the alcoves of each department are appliances for reference work, directly adjacent to the books. The students have direct access to all shelves and a dictionary catalogue. Students acquire, by this contact, facility with library ways, the inspiration of uninterrupted reference, and familiarity with literary surroundings.

The Librarian offers all new students of every department instruction in the use of the library, which enriches and facilitates the mastery of the other regular work of the curriculum. He gives familiar talks and practical drill under personal supervision, in the details of the use and purpose of classification, shelving, catalogues, indexes, manuals, books of reference, and bibliography.

Completed volumes of periodicals are bound to date. Poole's and other indexes of periodical and general literature are at hand to aid reference. Technical journals, not otherwise accessible, are also indexed in the card catalogue, and the bound volumes are shelved for reference as books in their respective departments.

Aside from the large files of complimentary periodicals and exchanges, the Library subscribes regularly for journals representing the latest and most scholarly research in every department.

## PERIODICAL LIST FOR 1910.

- \*Advocate of Peace.  
 Allgemeine Musick Zeitung.  
 \*American Academy of Medicine.  
 Bulletin.  
 American Academy of Political and Social Science. Annals (and Suppl.).  
 American Architect.  
 American Chemical Journal.  
 American Chemical Society.  
 Journal.  
 American Economic Association.  
 Publications.  
 \*American Economist.  
 American Entomological Society.  
 Transactions.  
 \*American Forestry.  
 American Geographical Society.  
 Bulletin.  
 American Historical Review.  
 American Homes and Gardens.  
 American Institute of Electrical Engineers. Transactions.  
 American Institute of Mining Engineers. Transactions.  
 American Journal of Anatomy.  
 American Journal of Archæology.  
 American Journal of Mathematics.  
 American Journal of Medical Sciences.  
 American Journal of Obstetrics and Medical Record.  
 American Journal of Philology.  
 American Journal of Physiology.  
 American Journal of Psychology.  
 American Journal of Religious Psychology and Education.  
 American Journal of Science.  
 American Journal of Sociology.  
 American Law Review.  
 American Machinist.  
 American Mathematical Monthly.  
 American Mathematical Society.  
 Bulletin.  
 American Mathematical Society.  
 Transactions.  
 \*American Medical Association.  
 Journal.  
 American Monthly Review of Reviews.  
 American Naturalist.  
 American Physical Education Review.  
 American Political Science Review.  
 American Railway Engineering and Maintenance of Way Association.  
 Proceedings.  
 American School Board Journal.  
 American Society for Testing Materials. Proceedings.  
 American Society of Civil Engineers.  
 Transactions.  
 American Society of Mechanical Engineers. Transactions.  
 Anglia.  
 Anglia. Beiblatt.  
 Annalen der Naturphilosophie.  
 Annalen der Chemie. Liebig.  
 Annalen der Physik u. Chemie. (Weidermann).  
 Annalen der Physik u. Chemie. (Weidermann) Beiblatt.  
 Annales de Chemie et Physique.  
 Annales des Pontes et Chaussées.  
 Annales des Sciences Naturalles-Botanique.  
 Annals of Botany.  
 Annals of Mathematics.  
 Annals of Surgery.  
 Archiv der Mathematik und Physik.  
 Archiv für die Gesamte Psychologie.  
 Archiv für Pathologie, Anatomie u. Physiologie u. f. Klin. Med. (Virchow.)  
 Archiv für Systematische Philosophie. (Berlin.)  
 Archives de Psychologie.  
 Archives of Internal Medicine.  
 Archives of Psychology.  
 Art Journal. (Lond.)  
 Association of Engineering Societies. Journal.  
 Association of Railway Superintendents of Bridges and Buildings. Report.  
 Astrophysical Journal.  
 Athenæum.  
 Atlantic Monthly.  
 Auk.  
 Banker's Magazine. (N. Y.)  
 Berliner Klinische Wochenschrift. (Berlin.)  
 Beton und Eisen.  
 Biological Bulletin. (Chic.)  
 Blackwood's Magazine.  
 Bookman.  
 Bookseller.  
 Boston Medical and Surgical Journal.  
 Botanical Gazette.  
 Botanische Centralblatt.  
 Botanische Zeitung. Abteil. I-II.  
 Brain.  
 British Medical Journal.  
 Builder.  
 Bulletin de Correspondence Hellenique.  
 Bulletin of Bibliography.  
 Canadian Society of Civil Engineers. Transactions.  
 \*Case and Comment.  
 Cassier's Magazine.  
 Cement and Engineering News.  
 Central Law Journal.  
 Centralblatt für Bakteriologie.  
 Abteil. I. Original and Referate; II.  
 Centralblatt für Stoffwechsel und Verdauungskrankheit.

- Century.  
 Charities. See Survey.  
 Chautauquan.  
 Chemical Abstracts.  
 Chemical News.  
 Chemical Society. (Lond.) Journal.  
 Chemisches Weekblad.  
 Chemisches Centralblatt.  
 \*Christian Science Journal.  
 \*Christian Science Sentinel.  
 \*Christian Statesman.  
 \*Christian Student.  
 Civic Quarterly. (University.)  
 Classical Journal of Classical Association of the Middle West and South.  
 Classical Philology.  
 Classical Quarterly.  
 Classical Review.  
 Classical Weekly.  
 \*Colorado Medical Journal.  
 \*Colorado Monthly. (University.)  
 \*Colorado School Journal.  
 Columbia School of Mines.  
 Quarterly.  
 \*Columbia University Quarterly.  
 Commercial and Financial Chronicle.  
 Compressed Air.  
 Comptes Rendus.  
 Concrete Engineering.  
 Contemporary Review.  
 Country Life in America.  
 Critic. Merged with Putnam's Monthly.  
 \*Cuba Bulletin.  
 Cumulative Book Index.  
 Current Literature.  
 \*Dental Record. (Lond.)  
 \*Dental Register. (Cincinnati.)  
 Deutsche Chemische Gesellschaft.  
 Berichte.  
 Deutsche Literaturzeitung.  
 Deutsche Medizinische Wochenschrift.  
 Deutsche Rundschau.  
 Dial.  
 \*Dominion Dental Journal. (Toronto.)  
 Dramatic Mirror.  
 Early English Text Society.  
 Economic Bulletin.  
 Economic Geology.  
 Economic Journal. (Lond.)  
 Edinburg Review.  
 Education.  
 Educational Review.  
 Electric Journal. (Pittsburg.)  
 Electric Railway Journal.  
 Electrical Age.  
 Electrical Review. (Lond.)  
 Electrical Review and Western Electrician.  
 Electrical World.  
 Electrician. (Lond.)  
 Electrochemical and Metallurgical Industry.  
 Elektrochemische Zeitschrift. (Berlin.)  
 Electrocraft.  
 Elektrotechnische Zeitschrift.  
 Elementary School Teacher. (Chic.)  
 Engineering.  
 Engineering—Contracting.  
 Engineering and Mining Journal.  
 Engineering Digest.  
 Engineering Index.  
 Engineering Magazine and Index.  
 Engineering News.  
 Engineering Record.  
 Englishische Studien.  
 English Historical Review.  
 Enseignement de Mathématique L' (Paris.)  
 Entomologists' Record and Journal of Variation.  
 Fliegende Blätter.  
 Fortnightly Review.  
 Forum.  
 Franklin Institute. Journal.  
 \*Frontier.  
 Gas Engine. (Cinn.)  
 Gene Civil, Le.  
 General Electric Review.  
 Geological Society of America. Bulletin.  
 Geological Society of London. Quarterly Journal.  
 \*Good Health.  
 Green Bag.  
 Harper's Magazine.  
 Hartford Seminary Record.  
 Harvard Law Review.  
 Harvard Studies and Notes in Philology and Literature.  
 \*Health.  
 Hermes: zeitschrift fur klassische Philologie.  
 Herrig's Archiv fur Studien Sprache und Literaturen.  
 Hibbert Journal.  
 Historische Zeitschrift. (Munich.)  
 \*Hochschul-machrichten.  
 Ice and Refrigeration.  
 Illuminating Engineer.  
 Independent. (N. Y.)  
 Index Medicus.  
 Index to Legal Periodicals and Law Library Journal.  
 Institute of Civil Engineers. Minutes of Proceedings.  
 Intermediaire des Mathématiciens. (Paris.)  
 International Clinics.  
 International Journal of Ethics.  
 International Labor Bureau. Bulletin.  
 International Studio.  
 Jahresbericht Uberfortschritt. d. klass. Alterumswissenschaft.  
 Johns Hopkins Hospital. Bulletin.  
 Johns Hopkins University. Studies  
 Journal de Botanique.



- Journal de Physique.  
 Journal fur Praktische Chemie.  
 Journal of American History.  
 Journal of Comparative Neurology.  
 Journal of Education. (Lond.)  
 Journal of Electricity, Power and Gas.  
 Journal of Experimental Medicine.  
 Journal of Experimental Zoology.  
 Journal of Geography.  
 Journal of Geology.  
 \*Journal of Industrial and Engineering Chemistry.  
 Journal of Infectious Diseases.  
 Journal of Medical Research.  
 Journal of Nervous and Mental Diseases.  
 Journal of Philology.  
 Journal of Philosophy, Psychology, etc. (N. Y.)  
 Journal of Physical Chemistry.  
 Journal of Physiology.  
 Journal of Political Economy.  
 \*Journal of Zoophily.  
 Kuntsschronik.  
 Lancet.  
 \*Law Book News.  
 \*Law Notes.  
 Law Times.  
 Library. (Lond. Quarterly.)  
 Library Journal.  
 Library Work.  
 Library World. (Lond.)  
 Literary Digest.  
 Locomotive Engineering. (N. Y.)  
   See Railway and Locomotive Engineering.)  
 London, Edinburgh and Dublin Magazine. (See Philosophical Magazine.)  
 Mathematical Gazette.  
 McClure's Magazine.  
 \*Medical Brief.  
 \*Medical Standard.  
 \*Memphis Medical Monthly.  
 Mercure de France.  
 Messenger of Mathematics.  
 Michigan Alumnus.  
 Mind.  
 Mineralogical Magazine. (Lond.)  
 Mines and Minerals. (Scranton.)  
 Mines and Mining. (Denver.)  
 Mining and Metallurgical Journal.  
 Mining and Scientific Press.  
 Mining Investor.  
 Mining Science.  
 Mining World.  
 Mitteilungen d. Kais. Deut. Archæolog. Instituts. Athenische Abteil.  
   Same Romische Abteil.  
 Modern Language Association of America. Publications.  
 Modern Language Notes.  
 Modern Medicine.  
 Modern Philology. (Chic. Univ.)  
 Monist.  
 Muenchner Medicinische Wochenschrift.  
 \*Municipal Facts.  
 Municipal Engineering.  
 Municipal Journal and Engineer.  
 Musical Courier.  
 Musical Times. (Lond.)  
 Musician.  
 Nation.  
 National Geographic Magazine. (Wash.)  
 Nature.  
 Neue Bahnen.  
 Neurologische Centralblatt.  
 New England Water Works Assoc. Journal.  
 New Music Review.  
 \*New Philosophy.  
 New York and Philadelphia Medical Journal.  
 New York Entomological Society. Journal.  
 Nineteenth Century.  
 North American Review.  
 \*North German Lloyd Bulletin.  
 Notes and Queries. (Lond.)  
 Nuova Antologia.  
 Open Court.  
 \*Our Dumb Animals.  
 \*Out Door Life.  
 Outing.  
 Outlook.  
 Overland Monthly.  
 Pädagogisches Archiv.  
 Pedagogical Seminary.  
 Phil. Engineering Club.  
 Proceedings.  
 Philosophical Magazine.  
 Philosophical Review.  
 Physical Review.  
 Physikalische Zeitschrift.  
 Plant World.  
 Poet Lore.  
 Political Science Quarterly.  
 Popular Science Monthly.  
 Power.  
 Psyche.  
 Psychological Index.  
 Psychological Review. Bulletin.  
 Psychological Review. Monographs and Supplements.  
 Psychologische Studien.  
 Public Health Journal.  
 Public Libraries.  
 Publisher's Weekly.  
 Putnam's Monthly and Reader.  
 Quarterly Journal of Economics.  
 Quarterly Journal of Mathematics.  
 Quarterly Journal of Microscopical Science.  
 Quarterly Review.  
 Railroad Age-Gazette.  
 Railway and Engineering Review.  
 Railway and Locomotive Engineering.



- Readers' Guide to Periodical Literature.
- \*Red Cross Notes.
- Review of Neurology. (Edinburgh.)
- \*Review of Religions.
- Review of Reviews. (See American Monthly.)
- Revue Archeologique.
- Revue de Medicine. (Paris.)
- Revue de Philologie, de Literatur, et Histoire Ancienne. (Paris.)
- Revue des Deux Mondes.
- Revue des Questions Historiques.
- Revue Général de Botanique.
- Revue Historique.
- Rheinische Museum.
- Roadmaster and Foreman.
- Romania.
- Royal Microscopical Society. Journal.
- \*Salvation.
- Schmidt's Jahrbuch der in-u. Aus-landischen gesammten Medicin.
- School Review.
- School Science and Mathematics. Science.
- Science Abstracts. A. Physics.
- Science Abstracts. B. Electrical Engineering.
- Scientific American.
- Scientific American. Supplement.
- Scottish Geographical Magazine.
- Scribner's Magazine.
- Semaine Medicale. (Paris.)
- Signale.
- \*Silver and Gold. (University.)
- \*Sister Republics.
- Society of Chemical Industry. Journal.
- Solicitor's Journal.
- \*Sound Currency.
- Spectator. (London.)
- \*Square and Compass.
- Street Railway Journal. (See Electric Railway Journal.)
- \*Sunset.
- Survey.
- Surveyor. (Lond.)
- Teachers' College Record.
- Technology Quarterly.
- \*Technology Review.
- Theater Magazine. (N. Y.)
- Therapeutic Gazette.
- Torrey Botanical Club. Bulletin.
- Torreya. Torrey Botanical Club.
- Trust Co.'s Magazine.
- Vierteljahrschrift fur Wissen-schaftliche Philosophie u. Soziologie. (Lpz.)
- Western Electrician. (Chicago.)
- (Merged with Electrical Review.)
- Western Journal of Education. (S. F.)
- Western Railway Club.
- Proceedings.
- Western Society of Engineers. Journal.
- Western World.
- Westminster Review.
- Wiener Klinische Wochenschrift. (Vienna.)
- Wochenschrift fur Klassische Philologie.
- World Today.
- World's Work.
- Yale Alumni Weekly.
- \*Yale Bulletin.
- Yale Review.
- Zeitschrift d. Praktische Geologie. (Berlin.)
- Zeitschrift d. Vereines Deutsche Ingenieure.
- Zeitschrift fur Analytische Chemie.
- Zeitschrift fur Angewandte Chemie.
- Zeitschrift fur Anorganische Chemie.
- Zeitschrift fur Bildende Kunst.
- Zeitschrift fur Deut. Morgenland. Gesellschaft.
- Zeitschrift fur Elektrochemie.
- Zeitschrift fur Klassische Philologie. (See Hermes.)
- Zeitschrift fur Mathematik u. Physik.
- Zeitschrift fur Philosophie u. Philosophische Kritik.
- Zeitschrift fur Physikalische Chemie.
- Zeitschrift fur Psychologie u. Physiologie des Sinnesorgane.
- Zeitschrift fur Romanische Philologie.
- Zeitschrift fur Tuberculosis.
- Zeitschrift fur Vergleichende Literatur Geschichte.
- Zeitschrift fur Vergleichende Sprachforschung.
- Zoologischer Anzeiger.
- Zoologisches Centralblatt.

\* Gift.

#### ANNUALS, CONTINUATIONS, AND OCCASIONAL PUBLICATIONS, 1910.

- American Catalogue.
- Annual American Catalogue.
- Annual English Catalogue.
- Annual Library Index.
- Arnolt-Muss Concise Dictionary of the Assyrian Language.
- Book List (Stechert).
- Boston Public Library. \* Annual list of new books.

- Bulletino della Commissione Archæologica Comunale di Roma.  
 Cajal. Studien ueber die Hirnrinde des Menschen.  
 Dictionary of National Biography. (Stephens & Lee.)  
 Encyklopædie der Mathematischen Wissenschaften.  
 Engler and Prantl. Natürlichen Pflanzenfamilien.  
 Goursat. Cours d'Analyse Mathématique.  
 Grout. Mosses.  
 Hazell's Annual.  
 Holway. North American Uredineæ.  
 International Catalogue of Scientific Literature—Botany.  
 Knachfuss. Künstler Monographien.  
 Kræpelin, Emil. Psychologische Arbeiten.  
 Levy, A. Michel. Etude sur la Dètermination des Feldspaths.  
 London Mathematical Society, Proceedings.  
 Mathematical Questions (from Educational Times.)  
 Merck's Archivés.  
 Meyer's Konversations-Lexicon.  
 Minerva.  
 Murray. New English Dictionary.  
 Nebraska Bibliographical Contributions.  
 North American Flora.  
 Ostwald. Lehrbuch der allgemeinen chemie.  
 Pauly. Real-encyclopædie der classischen Altertumswissenschaft.  
 Philippine Islands. Census Bulletin.  
 Quarterly Bibliography of Books Reviewed.  
 Qui Etes-Vous?  
 Railroad Red Book (D. & R. G.)  
 Readers' Guide to Periodical Literature.  
 Repertoire Bibliographique Francaise.  
 Ruggiero. Dizionario Epigraphico di Antichita Romane.  
 Sammlung von Abhandlungen aus dem gebiete der Pädagogischen  
     Psychologie und Physiologie.  
 Sargent, C. S. Trees and Shrubs.  
 Sars. Crustacea of Norway.  
 Smithsonian Institution:  
     Annual Report.  
     Bulletin.  
     Contributions to Knowledge.  
     Miscellaneous Collections.  
     Proceedings.  
 Society for the Promotion of Hellenic Studies. Journal.  
 Statesman's Year Book.  
 Thesaurus Linguae Latinæ.  
 Union Club (N. Y.) Annual.  
 United States Publications:  
     Congressional Record (daily during sessions).  
     Department of Agriculture. Library Bulletin.  
     Department of Agriculture. Experiment Station Record.  
     Department of Agriculture. Farmers' Bulletin.  
     Department of Agriculture. Bulletins of various divisions.  
     Department of Commerce and Labor. Bulletin.  
     Department of Commerce and Labor. Bureau of Census.  
         Bulletin.  
     Department of Commerce and Labor. Bureau of Census.  
         Special Reports.  
     Department of Commerce and Labor. Bureau of Manufactures.  
         Monthly Consular and Trade Reports.  
     Department of Commerce and Labor. Bureau of Manufactures.  
         Special Consular Reports.  
     Department of Commerce and Labor. Bureau of Standards.  
         Bulletin.  
     Department of Commerce and Labor. Bureau of Statistics.  
         Bulletin.  
     Department of Education. Annual Report of Commissioner.  
     Department of Education. Circulars.  
     Department of Finances. Summary.

Department of Labor. Annual Reports.  
 Department of Labor. Bulletin.  
 Patent Office. Official Gazette.  
 Superintendent of Documents. Catalogue of Public Documents  
 (monthly).  
 Weather Map (daily).  
 Weather Record.  
 United States Catalogue.  
 University Club (Denver) Annual.  
 University Club (N. Y.) Officers, etc.  
 University Club (Phil.) Officers.  
 Wer ist's?  
 Who's Who.  
 Who's Who in America.  
 World's Almanac.

### SCIENTIFIC AND LITERARY PUBLICATIONS RECEIVED BY EXCHANGE AND GIFT.

Aix-en-Provence. Societe d'Etudes Provenciales. Annales.  
 Alabama Geological Survey.  
 American Historical Association. Annual Reports.  
 American Museum. Journal.  
 American Philosophical Society. Proceedings.  
 Annales du Midi (Toulouse).  
 Annals of Iowa. Historical Quarterly.  
 Argentina. Sociedad Cientifica. Annales.  
 Arkansas Geological Survey.  
 Augustana College Library. Publications.  
 Australian Museum Records.  
 Basel Universitat. Programme.  
 Baylor University. Bulletin.  
 Belfast Natural History and Philosophical Society. Proceedings.  
 Bristol Naturalists' Society. Proceedings.  
 Brooklyn Institute of Arts and Sciences. Bulletin. Memoirs.  
 Brooklyn Institute of Arts and Sciences. Museum. Science Bulletins.  
 Bryn Mawr College. Monographs.  
 Buenos Ayres. Museo Nacional Anales.  
 Buffalo Historical Society. Publications.  
 Buffalo Society of Natural Sciences. Bulletin.  
 California State Mining Bureau. Bulletin.  
 Cambridge Philosophical Society. Proceedings.  
 Canada. Royal Society. Transactions.  
 Canadian Institute. Transactions.  
 Carnegie Institution of Washington. Annual Reports.  
 Carnegie Institution of Washington. Mt. Wilson (Cal.) Solar  
 Observatory. Publications.  
 Carnegie Institution of Washington. Publications.  
 Carnegie Institution of Washington. Year Book.  
 Chicago Academy of Sciences. Bulletin.  
 Chicago Historical Society. Annual Report.  
 Clark University. Nature Study Leaflets.  
 Clark University Library. Publications.  
 Clarkson Memorial School of Technology. Bulletin.  
 Clemson Agri. College. Extension Work.  
 Cold Spring Harbor. Monographs.  
 Colorado College. Studies.  
 Colorado Scientific Society. Papers.  
 Colorado State School of Mines. Technical and Engineering Society.  
 Bulletin.  
 Connecticut Academy of Arts and Sciences. Transactions.  
 Connecticut Historical Society. Collections.  
 Connecticut State Geological and Natural History Society. Bulletin.  
 Cornell University. Science Bulletin.  
 Davenport Academy of Natural Science. Proceedings.  
 Dennison University. Science Laboratory Bulletin.

- Dublin University Philosophical Society. Transactions.  
 Elisha Mitchell Scientific Society. Journal.  
 Foundations of Education (annual). By Mary Manasseine (Russian).  
 Freiburg. Naturforschenden Gesellschaft. Berichte.  
 Friends' Historical Society. Journal.  
 Gene Universite Seance.  
 George Washington University. Bulletin.  
 Georgia Geological Survey.  
 Glasgow Natural History Society. Transactions.  
 Greene. Contribution to Indiana Paleontology.  
 Hamburg. Mitteilungen der Mathematischen Gesellschaft in Hamburg.  
 Hopkins Seaside Laboratory. Contributions to Biology.  
 Illinois Natural History Society. Transactions.  
 Illinois State Laboratory of Natural History. Bulletin.  
 India. Royal Botanic Gardens. Peredeniya Annals.  
 Indiana Geological Survey.  
 Iowa Geological Survey.  
 Johns Hopkins University. Circulars.  
 Kansas Academy of Science. Transactions.  
 Kansas State Board of Agriculture.  
 Kasan (Russia). Physico-Mathematical Society. Bulletin.  
 Kiev. (Russia). Society of Naturalists. Memoirs.  
 La Plata. Demografia.  
 Laws Observatory Bulletin.  
 Leland-Stanford, Jr., University. See Hopkins Seaside Laboratory (above).  
 Lemberg (Austria). Chronik der Ukrainischen Sevchenko-gessellschaft der Wissenschaften. Berichte.  
 Lemberg (Austria). Sevchenko-gessellschaft. Mathematisch Section. Sammelchrift.  
 Lewis Institute. Bulletin.  
 Lick Observatory. Bulletin.  
 Lowell Observatory. Bulletin.  
 Lund (Sweden) Universitets Arskrift.  
 Madrid. Real Academia de Ciencias. Revista.  
 Madrid. Sociedad Espanola de Historia Natural. Boletin.  
 Madrid. Sociedad Espanola de Historia Natural. Memorias.  
 Manchester Field Naturalists' and Archaeologists' Society. Report and Proceedings.  
 Manchester Literary and Philosophical Society. Memoirs and Proceedings.  
 Manila. Department Public Instruction. Publications.  
 Manitoba Historical and Scientific Society. Transactions.  
 Maryland Geological Survey.  
 Massachusetts Labor Bulletin.  
 Mexico. Instituto Geologico.  
 Mexico. Sociedad Cientifica "Antonio Alazate."  
 Michigan Geological Survey.  
 Minnesota Academy of Natural Sciences. Bulletin.  
 Minnesota Botanical Studies.  
 Minnesota Geological Survey.  
 Missouri Botanical Gardens. Reports.  
 Missouri Geological Survey. Reports.  
 Missouri Historical Review.  
 Missouri Historical Society. Collections.  
 Montana Agricultural College. Science Studies.  
 Montana. State Entomologist. Annual Reports.  
 Montevideo. Collegio pio de Villa Colon. Observatory. Ano Meteorologico.  
 Same. Boletin.  
 Naples. Academia delle Scienze Fisiche e Matematiche. Rendiconto.  
 Napoli Regia Universita degli Studj de Annuario.  
 National Academy of Sciences (Wash.). Memoirs.  
 National Conference of Charities and Corrections. Bulletin.  
 Nebraska Geological Survey.



- New Jersey Geological Survey.  
 New South Wales. Geological Survey. Mines and Agriculture.  
 Records.  
 New York Botanical Gardens. Bulletin and Journal.  
 New York State Museum. Geologist's Reports.  
 Normal Seminary. Washington (State).  
 Northern Illinois State Normal School.  
 Nova Scotia Institute of Science. Transactions.  
 Oberlin College. Laboratory Bulletin.  
 Ohio Geological Survey.  
 Ohio University Bulletin.  
 Oklahoma Geological Survey.  
 Oporto (Portugal). Academia Polytechnica. Annæes Scientificos.  
 Oporto (Portugal). Academie Polytechnique de Porto. Obras Sobre  
 Mathematica.  
 Padua. R. Università degli Studi di Padova. Annuario.  
 Palermo. Rendiconti del Circolo Matematico di Palermo.  
 Para (Brazil). Museu Goeldi. Boletim.  
 Same. Memorias.  
 Park College Historical Club. Papers.  
 Park College Review.  
 Philadelphia Academy of Natural Sciences. Proceedings.  
 Philippine Islands. Dept. of Int. Ethnology Survey. Publications.  
 Porto Academia Polytechnica. Annales Scientificos.  
 Prague. Koeniglich-boehmische der Wissenschaften.  
 Sitzungsberichte.  
 Princeton University. Bulletin.  
 Princeton University. Contributions.  
 Recueil de Legislation. Toulouse.  
 Rome. Atti della Reale Accademia dei Lincei. Atti. Rendiconti.  
 St. Louis Academy of Science. Transactions.  
 St. Mary's College. (Kansas.)  
 St. Petersburg. Academié imperialé des Sciences. Bulletin.  
 Sao-Paulo. Sociedade Scientifica. Revista.  
 Sioux City Academy of Science and Letters.  
 Societe Zoologique de France. Bulletin.  
 South African Philosophical Society. Transactions.  
 Steiermark (Austria). Naturwissenschaftlichen Verein.  
 Mitteilungen.  
 Stockholm (Sweden). Societe Entomologique. Entomologisk  
 Tidskrift.  
 Texas Historical Association. Quarterly.  
 Tokio (Japan). Imperial University. Journal of the College of Science.  
 Toluca (Mexico). Instituto Cientifico y Literario "Porfirio Diaz."  
 Boletin.  
 Turin (Italy). Reale-Academia della Scienze di Torino, Atti Della.  
 Turin (Italy). Reale Osservatorio Astronomo. Annual.  
 Turin (Italy). Scienze Mediche. Archivio.  
 Union University. Quarterly.  
 Universidad de Buenos Ayres. Revista.  
 Universidad de Chili. Annales.  
 Universidad de la Habana. Revista de la Facultad de Letras y Ciencias.  
 Université de Grenoble. Annales.  
 Université de Toulouse. Bulletin.  
 University of California. Publications. Botany.  
 University of California. Publications. Classical Philology.  
 University of California. Publications. Economics.  
 University of California. Publications. Education.  
 University of California. Publications. Geology, Dept. of.  
 University of California. Publications. University Chronicle.  
 University of California. Publications. Zoology.  
 University of California Magazine.  
 University of Chicago. Theses.  
 University of Cincinnati. Bulletin.  
 University of Durham. Philosophical Society. Proceedings.  
 University of Illinois. Bulletin.

University of Illinois. Studies.  
 University of Iowa. Bulletin.  
 University of Kansas. Bulletin.  
 University of Maine. Studies.  
 University of Missouri. Studies.  
 University of Montana. Bulletin. Biological series.  
 University of Montana. Bulletin. Geological series.  
 University of Nebraska. Bulletin.  
 University of Nebraska. Studies.  
 University of Nebraska. Studies of Zoology Laboratory.  
 University of the State of N. Y. Publications.  
 University of North Carolina. Bulletin.  
 University of Ohio. Bulletin.  
 University of Oregon. Bulletin.  
 University of Pennsylvania. Contributions.  
 University of Pennsylvania. University Bulletin.  
 University of Tennessee. Record.  
 University of Texas. General Series. Bulletin.  
 University of Texas. Humanistic Series.  
 University of Texas. Medical Series.  
 University of Texas. Mineral Survey. Bulletin.  
 University of Texas. Science Series.  
 University of Texas. Record.  
 University of Toronto. Studies.  
 University of Vermont. Contributions.  
 University of Wisconsin. Bulletin.  
 University of Wisconsin. Economics and Political Science Series.  
 Bulletin.  
 University of Wisconsin. Engineering Series. Bulletin.  
 University of Wisconsin. History. Bulletin.  
 University of Wisconsin. Philology and Literature Series. Bulletin.  
 University of Wisconsin. Science Series. Bulletin.  
 Upsala. Entomologisk Tidskrift.  
 Vanderbilt University. Quarterly.  
 Warsaw. Université Impériale. Observations faites au cercle méridien de  
 l'observatoire de Varsovie.  
 Washington Academy of Sciences.  
 Washington University. Bulletin.  
 Washington University. Theses.  
 Wesleyan University. Bulletin.  
 Western Reserve University. Bulletin.  
 Whitman College Quarterly.  
 Wilson (Orinthological Club). Bulletin.  
 Wisconsin Natural History Society. Bulletin.  
 Yale University. Astronomical Observatory. Publications.  
 Zurich (Switzerland). Naturforschenden Gesellschaft.  
 Vierteljahrschrift.

# LIBRARIES FROM WHICH BULLETINS AND PUBLICATIONS ARE REGULARLY RECEIVED AS GIFTS.

Boston Public Library.  
 Bowdoin College Library.  
 Brooklyn Public Library.  
 California State Library.  
 Clark University Library.  
 Delaware State Library Commission.  
 Denver Public Library.  
 Detroit Public Library.  
 Hartford Public Library.  
 Helena Public Library.  
 Idaho Free Library Commission.  
 Indiana Public Library Commission.  
 Iowa Grand Lodge of Masons Library.  
 Iowa Library Commission.



Kansas Traveling Library Commission.  
 Los Angeles Public Library.  
 Maryland State Library Commission.  
 Massachusetts Free Library Commission.  
 Milwaukee Public Library.  
 Minnesota State Library Commission.  
 Nebraska Public Library Commission.  
 New Hampshire Public Library Commission.  
 New Jersey Public Library Commission.  
 New York Mercantile Library.  
 New York Public Library.  
 New York University Club Library.  
 Newark Free Library.  
 Oberlin College Library.  
 Ohio State Board of Library Commission.  
 Omaha Public Library.  
 Pennsylvania Free Library Commission.  
 Philadelphia Free Library.  
 Pittsburg Carnegie Library.  
 Portland (Oregon) Public Library.  
 Pratt Institute Library.  
 Providence Libraries (Co-operative).  
 St. Louis Public Library.  
 Salem (Wash.) Public Library.  
 San Francisco Free Library.  
 San Francisco Mechanics-Mercantile Library  
 Scranton Public Library.  
 Springfield (Mass.) City Library.  
 Texas State Library.  
 Vermont Library Commission.  
 Wisconsin Free Library Commission.  
 Worcester Free Public Library.

# NEWSPAPERS DONATED BY THE PUBLISHERS AND SOME OTHERS ON FILE IN THE READING ROOM.

## EASTERN.

\*Boston Transcript. (Daily.)  
 \*Chicago Tribune. (Daily.)  
 \*Christian Science Monitor.  
 \*London Times. (Daily.)  
 \*N. Y. Tribune. (Daily.)  
 \*Washington Post. (Daily.)

## COLORADO.

Alamosa. Courier.  
 Alamosa. Independent Journal.  
 Aspen Daily Times.  
 Boulder. Camera. (Daily.)  
 Boulder. Herald. (Daily.)  
 Boulder. News. (Weekly.)  
 Boulder County Miner. (Weekly.)  
 Breckenridge Bulletin.  
 Breckenridge. Summit County  
 Journal.  
 Carbondale Item.  
 Central City. Gilpin Observer.  
 Central City. Weekly Register-Call.  
 Colorado Graphic.  
 Colorado Springs. Evening Tele-  
 graph. (Daily.)  
 Colorado Springs. Gazette. (Daily.)  
 Colorado Transcript. See under  
 Golden.

Denver. Catholic Register. (Week-  
 ly.)  
 Denver. Daily Mining Record.  
 \*Denver Post. (Daily.)  
 \*Denver Republican. (Daily.)  
 Denver. Republican. (Daily) for  
 Binding.  
 \*Denver. Rocky Mountain News.  
 (Daily.)  
 \*Denver. Times. (Daily.)  
 Eldora Record.  
 Erie Herald.  
 Fort Morgan. Morgan County  
 Herald.  
 Fort Morgan Times.  
 Fowler Tribune.  
 Georgetown Courier. (Weekly.)  
 Gilpin Observer. See under Centr  
 City.  
 Golden Globe. (Weekly.)  
 Golden. Colorado Transcript.  
 (Weekly.)  
 Grand Junction Daily News.  
 Grand Junction Herald.  
 Greeley Tribune.  
 Gunnison News-Champion.  
 Highland Chief.

|                                                 |                                                   |
|-------------------------------------------------|---------------------------------------------------|
| Idaho Springs Mining Gazette.<br>(Weekly.)      | Pueblo Star-Journal.                              |
| Idaho Springs Siftings. (Weekly.)               | Pueblo Sunday Opinion.                            |
| La Junta Tribune. (Weekly.)                     | Saguache Crescent.                                |
| Lake City Phonograph.                           | Salida. Mail.                                     |
| Lake City Times.                                | Salida. Record.                                   |
| Lamar Sparks.                                   | Salida Republican.                                |
| Leadville Herald-Democrat. (Daily.)             | Sterling Democrat.                                |
| Logan County Advocate. See under<br>Sterling.   | Sterling. Republican Advocate.                    |
| Longmont Ledger.                                | Summit County Journal. See under<br>Breckenridge. |
| Loveland. Register.                             | Svenska Amerikanska Weekly.<br>Denver. (Swedish.) |
| Loveland. Reporter.                             | Trinidad. Chronicle-News. (Daily.)                |
| Montrose Press. (Weekly.)                       | Walden. See New Era, above.                       |
| Morgan County Herald. See under<br>Fort Morgan. | Weld County Republican.                           |
| New Era. (Walden.)                              | Western Slope Criterion (Olathe).                 |
| Pueblo Chieftain.                               | Wray Gazette.                                     |

\* Purchased.

### THE UNIVERSITY PUBLICATIONS

1. Catalogue, published in March, containing general information about the University and its separate departments.
  2. Summer School Catalogue.
  3. The special Announcements of the Departments of Medicine, Law, Engineering, Education, and of the Graduate School, published in June.
  4. The biennial report of the Regents of the University, recording the progress of the Institution during the previous biennial period, and showing the University budget of receipts and expenditures for the same period. Published biennially in October.
  5. The University of Colorado Studies, published at irregular intervals, and containing original contributions by members of the University Faculties.
  6. The Investigations of the Departments of Psychology and Education, published from time to time.
  7. Medical Bulletin, published by the Medical Department.
  8. The Booklet of Views, containing half-tone cuts of the buildings and grounds.
  9. The University News-Letter, published at intervals of three months, and containing current news of the University.
  10. Register of the Alumni, published triennially and recording the address and occupation of each graduate of the University.
  11. The Commencement Addresses, containing the Baccalaureate Address and the Commencement Oration, published in June.
- These publications may be obtained by application to the Secretary of the University.

## STUDENT PUBLICATIONS

A weekly paper, which is named after the University colors, *The Silver and Gold*, and a monthly literary magazine called *The Colorado Monthly*, are published by the students.

*The Coloradoan*, an annual, is published by each Junior Class.

*The Journal of Engineering* is published annually by the students of the College of Engineering.

*The University of Colorado Hand-Book* is published annually by the Christian Associations.

*The Civic Quarterly* is published by the Civic Society.

## THE UNIVERSITY SCIENTIFIC SOCIETY

The University Scientific Society was founded in 1888, for the purpose of affording a common meeting ground for all those interested in scientific subjects—students and townspeople, as well as the members of the University faculty. The growth of the more specialized scientific societies rendering necessary a reorganization in 1907, the constitution was changed to meet the need felt for a society in which topics of a wider university interest could be discussed. Regular meetings of the Society are held every Monday evening at eight o'clock. The papers read before these meetings are intended to set before the members some of the results of modern investigation in literature, language, and history, as well as in more strictly scientific work in the natural sciences.

## HONOR SOCIETIES

Three honor societies, to which students of high scholastic standing are eligible, have chapters at the University of Colorado. Phi Beta Kappa elects to membership senior students in the College of Liberal Arts. Sigma Xi offers membership to graduate and undergraduate students who have shown special ability in scientific investigations. Tau Beta Pi is a technical society, selecting members from students in the College of Engineering.

## STUDENT LITERARY SOCIETIES AND CLUBS

Literary societies and debating clubs are organized and conducted each year by the students.

The Richard's Literary Society comprises in its limited membership both men and women, and aims to promote all dramatic, oratorical, and literary activities. It maintains yearly a series of inter-school

debates and open meetings, and takes part in the celebration of national holidays.

The Scribblers' Club aims to develop talent in original literary work. Meetings are held every two weeks, the programmes consisting entirely of poems, essays, sketches, or stories written by the members. Membership is open to both men and women.

The University of Colorado Debating Society was organized for the purpose "of cultivating a correct mode of speaking and qualifying its members by practice to express their opinions in public in a correct manner." The Society spends most of its time in senate and parliamentary practice. Membership is open to men of the University who are interested in debating and oratory.

The Engineers' Literary Society offers to students in the College of Engineering the same opportunities for development along literary lines which the Richard's Literary Society gives to college students. Weekly meetings are held during the academic year.

The Journal Club is an organization of those students, especially of the departments of education and psychology, interested in current educational literature and events and contemporary educators, articles, books, educational news and experiments. This club meets each week.

The Civic Club, composed of students in the Department of Economics and Sociology, has regular meetings for the discussion of subjects of interest in that department. The Civic Quarterly is published by the Club.

The Historical Society is composed of students in the Department of History. Its meetings are devoted to a study of contemporary history.

The University Dramatic Club is organized for the purpose of promoting dramatic study. Rehearsals are held regularly under the supervision of the Instructor in Oratory, and one or more public presentations are given during the year.

The University of Colorado Graduate Club is organized for literary and scientific discussions.

The Civil Engineers' Society, the Electrical Engineers Society—a student branch of the American Institute of Electrical Engineers,—and the Mechanical-Chemical Society have been organized by the students in the College of Engineering. These societies meet every two weeks.

In each original papers on questions of technical interest are presented and discussed. These three societies joined as "The Associated Engineering Societies" publish the Journal of Engineering.

The Medical Historical Society is an organization composed of seniors in the School of Medicine. At its meetings biographical sketches of physicians are presented.

### MUSICAL ORGANIZATIONS

There are three musical organizations in the University.

The University Chorus is open to students and others passing a satisfactory examination in voice and sight-reading. Each year one or more concerts are given during the winter. A music festival is held in the spring, a Symphony Orchestra and soloists being engaged for the festival.

The University band of twenty-five members furnishes music for the various general University functions.

Membership in the University quartettes is determined by competitive examination. An annual spring tour is made by these organizations.

Examinations for entrance to any of the above organizations will be held during the last week of September. All University musical organizations are under the direction or the general supervision of the Professor of Music.

### CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association and the Young Women's Christian Association have organizations in the University, which are open to members of the faculties and students of all departments.

Regular weekly religious services and classes for the study of the Bible are held separately by each Association.

Vesper services are held in the Chapel under the auspices of these organizations.

Resident Secretaries are employed by the Associations, and their services are at the disposal of prospective students and their friends. A copy of the Students' Handbook, which is issued by the Associations, and is descriptive of life at the University, is furnished upon request.

The Y. W. C. A. conducts a Board and Room Register, a Book Exchange, and a Self-Help Bureau for the convenience of women students



at the opening of each school year. The Y. W. C. A. offices are in the Woman's Building, and are open at all times to the women of the University.

The Y. M. C. A. has offices at 1307 College avenue. A permanent employment bureau is conducted.

Church attendance is optional, but students are advised to attend some one of the numerous churches in town. The churches in Boulder are Baptist, Catholic, Christian, Christian Science, Congregational, Episcopal, Lutheran, Methodist, Presbyterian, Seventh Day Adventist, Seventh Day Baptist, Swedish Baptist and Swedish Lutheran.

### CHAPEL EXERCISES

The period from 11:00 to 11:30 is set apart for daily assembly of students. During this period no class or lecture work is conducted.

On Monday, Tuesday, and Wednesday the attendance is required for the first, second, and third chapel divisions, respectively, and a brief address is given by a member of the Faculty or by some speaker invited for the occasion. The attendance on other days is voluntary. On Thursday the exercises are devotional. On Friday, after Scripture reading and a hymn, time is allowed for various student meetings.

### STUDENT PASTOR

In the fall of 1909 the Synod of the Presbyterian Church of Colorado appointed Rev. J. Wilson Currens, M.A., to represent that denomination in the University. He is a pastor not only to the students of his own denomination, but also to those of other denominations.

### HIGH-SCHOOL DAY

The observance of High-School Day has been made one of the regular features of the academic year. The purpose of this day is to afford to the senior students of the High Schools an opportunity of visiting the State University, inspecting its buildings and grounds and so far as possible learning the scope and spirit of its life and work. The railroads make special rates for High-School Day, and thus place a visit to the University within the reach of most of the High-School students of the State.

## ALUMNI ASSOCIATION

The University of Colorado Alumni Association was organized in 1882. Its purposes are to aid in promoting the interests of the University of Colorado, and to cultivate sociability and good fellowship among its members. The annual meeting and annual dinner of the Association occur at the University during Commencement Week. Local alumni associations have been formed in the principal cities and towns in Colorado. Among those now in existence are the following: The Cripple Creek District Alumni Association, The Denver Alumni Association, The Durango Alumni Association, The Telluride Alumni Association, The Leadville Alumni Association, The Boulder Alumni Association, The Pueblo Alumni Association, The Greeley Alumni Association, and The Idaho Springs Alumni Association.

Officers of the General Alumni Association are elected at the annual meeting. The present officers are: H. Wendell Stephens, 1906, President; William H. Pease, 1897, Vice-President; Frank H. Wolcott, 1901, Secretary-Treasurer; Mrs. Gertrude F. Currens, 1900, 1908, and Frank L. Moorhead, 1907, 1909, Executive Committee.

## THE ASSOCIATED STUDENTS

The student body is organized into an association known as "The Associated Students of the University of Colorado." Through this Association the students act collectively in all their University relations. There are three executive boards—the Commission, the Athletic Board and the Debating Board. The Commission controls general interests and the other two boards the activities indicated by the names; together they appoint the general manager who has direct control of, and responsibility for, every student enterprise of general interest. By the payment of a \$5.00 fee any student, alumnus, or member of the faculties is entitled to admission to all local contests, games or other events under the Association's auspices. Provision is made in the Constitution for a careful supervision of student funds, for the recall of any officers and for the initiative and referendum.

The officers for the present year are—President, Lloyd L. Hamilton; Vice President, W. Roy Armor; Secretary, Josephine I. Gladden; General Manager, Frank L. Moorhead, B.A., LL.B.; Yellmaster, George Crowder. The members of the Commission are the president, vice president, secretary and yellmaster of the Associated Students, and Professor John B. Phillips, Herbert F. Bonnell, Ernest L. Rhoads, John T. O'Brien,

and A. Elmer Stirrett. The members of the Athletic Board are Professor George Norlin, Professor Oliver C. Lester, Professor John A. Hunter, the president of the Associated Students, Ernest L. Rhoads and A. Elmer Stirrett. The members of the Debating Board are Professor John S. McLucas, Professor William H. Pease, the president of the Associated Students, W. Roy Armor and Herbert F. Bonnell.

## ORATORICAL AND DEBATING INTERESTS

Public debates and oratorical contests are held under the management of the Debating Board of the Associated Students. This Board has power to regulate debating and oratorical contests in all of their forms—intercollegiate, inter-school, and inter-class.

The Debating Board conducts each year prize contests. Cash prizes are given.

In 1895, Hon. Sidney A. Giffin tendered an annual prize for excellence in public debate in the College of Liberal Arts. The offer was accepted by the Regents of the University. Each college class is represented by two members, one being appointed by the class and one by the Committee of the Faculty. The subject is chosen by the donor of the prize. There are three judges appointed, one by the donor, one by the President of the University, and one by the debaters. During preparation a short brief may be committed to writing, but no part of the argument. Contestants speak but once; they may occupy twelve minutes each. The prize is awarded for the best individual argument.

The University holds annual debates with the universities of Kansas, Missouri, and Texas. The debating teams consist of the honor men of the debating class, which is under the direct supervision of the debating coach. Any person in the University may enter the class, provided he has registered before October 1.

The Board arranges programmes for the observance of national holidays that fall within the academic year.

## THE BENNETT PRIZE

The Bennett prize is awarded annually at Commencement for the best essay on *The Principles of Free Government*. Any student in the University may compete. The prize awarded is the income of the sum of \$400 presented to the Regents of the University by Hon. William J. Bryan, Trustee for Philo Sherman Bennett.

## PHYSICAL TRAINING AND ATHLETICS

Realizing that properly conducted physical training is an essential element in the education of students, the Regents have provided a gymnasium and equipped it with modern apparatus for physical training. A Physical Director is appointed, who devotes his time to the work. He has supervision of gymnasium for both men and women and directs all athletic sports maintained by the student body, including coaching and training football, baseball, basket ball, hockey, cross country, and track teams.

To aid the Physical Director in his work two assistants are employed, and from time to time as conditions demand the Athletic Board employs extra assistance for the athletic teams.

All students are urged to take regular exercise and a physical examination. All first year students of the College of Liberal Arts are required to do a prescribed amount of exercise amounting to three hours weekly beginning in November and lasting until May, and to take a physical examination. The vital organs are carefully examined; bodily defects are noted; anthropometric measurements based on the report of the American Association of Physical Education are taken, together with the Intercollegiate Strength Test. With these data, supplemented by a personal and family history concerning hereditary tendencies, habits, etc., it is possible for the Physical Director to prescribe a course of exercise, which, if faithfully carried out, will tend to correct defects, build up the body and raise the general vitality of the system. A record of the examinations is kept and the work is marked on the same scale as other college subjects. Special work, such as tumbling, boxing, wrestling, fencing, and higher apparatus work is provided. Special attention is given to theory and practice of the four leading sports.

Excellent provision is made for the maintenance of athletic games. The athletic field is located upon the campus south of the gymnasium. The field is suitably arranged for all athletic sports. The gridiron and baseball diamond are placed in the center, and a quarter-mile cinder track fifteen feet in width encircles the field. Substantial grandstands with a seating capacity of two thousand five-hundred are constructed on the east and west sides. Beneath the grandstands are dressing and training quarters for all athletic teams. These quarters are provided with shower baths, rubbing tables, and lockers. East of



the gymnasium is the women's athletic field, which is laid out for the playing of the game of English field hockey.

Baseball, football, basket ball, and track and field athletic schedules are arranged each year. These not only include games within the State, but interstate games as well. Cross country running and association football are given attention. During cold weather many find healthful exercise in skating on the small lake situated on the campus. Four well-equipped courts provide exercise for those playing tennis. Inter-class and inter-school athletic contests are held and encourage a healthy spirit of rivalry among the students.

General supervision of athletic sports in the University is vested in a Board of Control, consisting of three members appointed by the President from the Faculty, and the President of the Associated Students and two student members appointed by him. The Board has control of all funds for athletic purposes and power to decide upon all matters pertaining to athletic interests, eligibility of players, schedule of games, etc.

### DEAN OF WOMEN

The Dean of Women devotes most of her time to the interests of the women students of the University. Miss Martha G. McCaulley, formerly of Wellesley, was appointed Dean of Women in September, 1906.

### WOMAN'S LEAGUE

The Woman's League, a voluntary association composed of the women students of the University, was established in 1895. It has a two-fold purpose: first, to promote the social and intellectual welfare of the women of the University; and, secondly, to establish a loan fund for the benefit of the women students. This fund is at present about one thousand dollars.

The Board of Control of the League consists of an Executive Committee, made up of the following officers: President, First and Second Vice Presidents, Corresponding Secretary, Recording Secretary, Treasurer, and Chairman of the Entertainment Committee. These officers are elected in the last month of the school year. Each officer appoints a committee to help her, and these committees welcome the women students who are new-comers to the University, and extend to them a helping hand whenever needed. There is also an Advisory Board, chosen from the wives of members of the Faculty, who meet with the Board



of Control every month, and assist them in planning the entertainments and other work of the League.

The Woman's Building furnishes headquarters for the women of the University. Here are the offices of the Dean of Women, the Woman's League, and the Young Women's Christian Association. There is a hall for meetings and entertainments.

### ENTRANCE

Students on arrival at the University may obtain information concerning rooms and board at the Secretary's office in the Main Building. Usually the trains are met by representatives of the Christian Associations. The Y. W. C. A. and Woman's League rooms in the Woman's Building are open for the reception of women students during the opening days of the University.

The office is open for registration, beginning Friday morning preceding the opening day of the University. All students are requested to register as soon as possible after their arrival.

### REQUIREMENTS FOR ADMISSION

Candidates for admission are expected to be graduates of a standard four-year high or preparatory school, or to have completed a corresponding amount of work under other conditions.

Students may be admitted on the passing of satisfactory examinations or on the presentation of satisfactory certificates from an accredited high school.

Applications from graduates of a non-accredited school will be considered as the merits of each case may warrant; but full standing in such instances shall be conditional upon the subsequent work of the student concerned.

Candidates twenty-one years of age, who cannot satisfy the admission requirements, but are qualified to pursue special work, may be admitted to certain courses on the approval of the proper committee of the faculty.

Certificates of moral character may be required from all applicants for admission.

Fifteen units are required for admission. Entrance conditions will not be allowed beyond the equivalent of two units. A unit course of study is defined as a course covering a school year of not less than thirty-six weeks, with five periods of at least forty-five minutes each per

week, two periods of Manual Training or Laboratory work being equivalent to one period of classroom work. This is equivalent to one hundred and eighty actual "periods" per unit. The fifteen units are equivalent to thirty "points."

ADMISSION TO THE COLLEGE OF LIBERAL ARTS, COLLEGE OF COMMERCE AND  
COLLEGE OF EDUCATION.

The candidate for admission should present fifteen units as follows:

|                              |       |
|------------------------------|-------|
| Mathematics                  | 2     |
| Languages other than English | 4     |
| English                      | 3     |
| History                      | 2     |
| Science                      | 2     |
| Electives                    | 2     |
|                              | <hr/> |
|                              | 15    |

Electives may be chosen from the following: Mathematics, 2; Greek, 2; Latin, 2; French, 2; German, 2; Spanish, 2; History, 2; English, 2; Science, 2; Psychology, 1-2 or 1; Drawing, 1; Manual Training or Domestic Science, 1.

*All students, who do not present the units specified in the above table of requirements for admission but who do present fifteen acceptable units, will be regularly admitted. Such students will, however, be required to elect in College courses that will fulfill the requirements specified, e. g., if a student enters with but two units of Language other than English, then he must include in his College course the equivalent of two units in foreign language. This provision materially widens the scope of electives that will be accepted for College entrance.*

1. Half units will not be accepted in Physics and Chemistry.
2. Students who present three units of Greek are required to present only one unit of Science, but they must have a total of fifteen units
3. Students who do not present Solid Geometry for entrance must either choose Mathematics among the freshman required subjects, or pursue the course in Solid Geometry in the freshman or sophomore year. It is advised that students present three units in Mathematics.
4. For the foreign language requirement four units of Latin are preferred, at least two units urgently advised. Students intending to pursue the study of Latin in the University should present four units

in Latin for entrance; those intending to pursue the study of Greek should present preferably three, at least two, units of Greek.

#### ADMISSION TO THE COLLEGE OF ENGINEERING.

Candidates for admission should present the following units:

|                                                          |    |
|----------------------------------------------------------|----|
| Mathematics (Algebra, Plane and Solid Geometry).....     | 3  |
| Languages other than English, at least.....              | 2  |
| English .....                                            | 3  |
| History .....                                            | 2  |
| Science (1 unit of Physics and 1 unit of Chemistry)..... | 2  |
| Electives .....                                          | 3  |
|                                                          | —  |
|                                                          | 15 |

Students not presenting one unit in Chemistry for entrance will be required to take four actual hours' laboratory work per week in general Chemistry throughout the freshman year without credit.

The electives are the same as for the College of Liberal Arts, with the addition of one unit of shop work.

#### ADMISSION TO THE SCHOOL OF MEDICINE.

In addition to a regular four-year high-school course or equivalent, two years of college work are required, estimated at sixty semester hours. See page 199.

#### ADMISSION TO THE SCHOOL OF LAW.

Requirements for the School of Law are the same as for the College of Liberal Arts; with the proviso that at least two units of Latin are required among the units in foreign languages. *Beginning September, 1912, two years of college work will be required for admission.*

#### DESCRIPTION OF UNITS IN ENGLISH.

The National Conference on Uniform Entrance Requirements in English voted that the following requirement for the years 1913, 1914, and 1915 should be recommended to the constituent bodies for adoption:

Preparation in English has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

## English Grammar and Composition.

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, paragraphs, and the different kinds of whole composition, including letter-writing, should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise narration, description, and easy exposition and argument based upon simple outlines. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

## Literature.

The second object is sought by means of two lists of books, headed respectively *reading* and *study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of authors whose works he reads and with their place in literary history.

a. Reading—The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving him a first-hand knowledge of some of its best specimens. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from which at least ten units\* are to be selected, two from each group.

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\* Each Unit is set off by semicolons.

I. The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books, I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Vergil's *Æneid*. The Odyssey, Iliad, and *Æneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

II. Shakespeare's *Merchant of Venice*; *Midsummer Night's Dream*; *As You Like It*; *Twelfth Night*; *Henry the Fifth*; *Julius Cæsar*.

III. Defoe's *Robinson Crusoe*, Part I; Goldsmith's *Vicar of Wakefield*; either Scott's *Ivanhoe* or Scott's *Quentin Durward*; Hawthorne's *House of the Seven Gables*; either Dicken's *David Copperfield*, or Dicken's *Tale of Two Cities*; Thackeray's *Henry Esmond*; Mrs. Gaskell's *Cranford*; George Eliot's *Silas Marner*; Stevenson's *Treasure Island*.

IV. Bunyan's *Pilgrim's Progress*, Part I; The Sir Roger De Coverley Papers in the *Spectator*; Franklin, *Autobiography* (condensed); Irving's *Sketch Book*; Macaulay's *Essays on Lord Clive and Warren Hastings*; Thackeray's *English Humorists*; Selections from *Lincoln*, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail*; either Thoreau's *Walden* or Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *a Piece of Chalk*; Stevenson's *Inland Voyage and Travels With a Donkey*.

V. Palgrave's *Golden Treasury* (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard*, and Goldsmith's *Deserted Village*; Coleridge's *Ancient Mariner*, and Lowell's *Vision of Sir Launfal*; Scott's *Lady of the Lake*; Byron's *Childe Harold*, Canto IV, and *Prisoner of Chillon*; Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's *Raven*, Longfellow's *Courtship of Miles Standish*, and Whittier's *Snow-Bound*; Macaulay's *Lays of Ancient Rome*, and Arnold's *Sohrab and Rustum*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News From Ghent to Aix*, *Home Thoughts*



From Abroad, Home Thoughts From the Sea, Incident of the French Camp, Hervé Riel, Pheidippides, My Last Duchess, Up At a Villa—Down in the City.

b. Study—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. For this close reading are provided a play, a group of poems, an oration, and an essay, as follows:

Shakespeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, and *Comus*; either Burke's *Speech on Conciliation With America*, or both Washington's *Farewell Address*, and Webster's *First Bunker Hill Oration*; either Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

### MATRICULATION SCHOLARSHIPS

The pupil in each graduating class of an accredited high school of Colorado, who has maintained the highest record in studies is entitled to a scholarship in the University of Colorado, consisting of remission of the annual tuition, for four years in the College of Liberal Arts, Commerce, Education or Engineering.

### SPECIAL STUDENTS AND ADVANCED STANDING

Special students who wish to become candidates for a degree must fulfill all requirements for admission and complete the prescribed courses in the regular manner. See page 52.

Students coming from institutions of like grade should bring certificates definitely stating the amount of work done in each subject. Real equivalents will be accepted.

### SCHOOLS SEEKING TO BE ACCREDITED BY THE UNIVERSITY OF COLORADO

The aim of the High-School Committee of the University is that the list of Accredited High Schools shall be in a sense a roll of honor, a list of schools whose standing is in no way doubtful. In pursuance of this ideal a school that is not clearly strong in the support of its community, in organization, in teaching force, in standards of scholarship, in equipment and in school tone and spirit cannot be placed or re-

tained on the list. Wherever there is a reasonable doubt in respect to any of these particulars, the committee will feel justified in postponing action or in dropping a school. It is hoped that the following statements will help to a clearer understanding of the governing principles of the High-School Committee, and may indicate some specific aims for the guidance of school officers:

1. There should be in any community, supporting a High-School, something of enthusiasm for the school, some pride in it, and a well-marked willingness, coupled with the ability to spend money and to spend it intelligently. The attitude toward the teacher should be one of consideration and co-operation.

2. The location and construction of the buildings; the lighting, heating and ventilation; the nature and care of the lavatories, the corridors, closets, water supplies, school furniture, apparatus must be such as to insure hygienic conditions for both pupils and teachers.

3. The library, the laboratory and all other equipment must be adequate to the needs of instruction. They should be much more than barely adequate.

4. The teaching staff should consist of at least three teachers of academic preparation equivalent to that usually represented by the B.A. degree. They should have had some professional training (the best evidence of which is professional experience and success), and should have enthusiasm for their work.

5. It is strongly advised that no teacher be required to teach more than five periods per day. No school will be considered which requires more than six periods of any teacher.

6. No school will be considered whose records show an abnormal number of pupils per teacher.

7. It is expected that there will be an earnest spirit of co-operation between teachers and teachers, and between teachers and pupils, and that the general, intellectual, moral and school tone will be high.

8. A school asking to be accredited should have been completely organized on the above basis long enough to have graduated classes for two years, and should have a creditable class for graduation in the year in which it makes its application. A school, some of whose graduates have gone on to higher institutions, is more acceptable than one of which this is not true.

9. The high school should have a sound and well-balanced course of study, and graduation from the school should be based upon not less than fifteen units.

## \*ACCREDITED SCHOOLS

Alamosa High School.  
Arvada High School.  
Aspen High School.  
Berthoud High School.  
Brighton High School.  
Canon City High School.  
Central City High School.  
Cheyenne (Wyo.) High School.  
Colorado Springs High School.  
Cripple Creek High School.  
Delta High School.  
Denver High School, East Side.  
Denver High School, Manual Training.  
Denver High School, North Side.  
Denver High School, South Side.  
Denver High School, West Side.  
Douglas County High School (Castle Rock).  
Durango High School.  
Eaton High School.  
Fort Collins High School.  
Fort Morgan High School.  
Georgetown High School.  
Glenwood Springs High School.  
Golden High School.  
Grand Junction High School.  
Greeley High School.  
Gunnison High School.  
Holly High School.  
Huerfano County High School (Walsenburg).  
Idaho Springs High School.  
Lamar High School.  
Las Animas High School.  
Leadville High School.  
Littleton High School.  
Logan County High School (Sterling).  
Longmont High School.  
Loveland High School.  
Manitou High School.  
Monte Vista High School.

Montrose High School.  
Otero County High School (La Junta).  
Ouray High School.  
Paonia High School.  
Pueblo High School, District No. 1.  
Pueblo High School, District No. 20.  
Rocky Ford High School.  
Saguache County High School (Saguache).  
Salida High School.  
South Canon City High School.  
State Preparatory School, Boulder.  
Telluride High School.  
Trinidad Public High School.  
Victor High School.  
Wheat Ridge High School (Alcott).  
Miss Wolcott's School, Denver.  
Wolfe Hall, Denver.

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\* Arranged in alphabetical order.

Blank forms of application are furnished to those high schools desiring to be placed on the accredited list of the State University. All applications will be considered in full meeting of the University Senate.

### DORMITORIES

Students living on the campus are subject to the following rates: Unfurnished rooms, including heat and light, men's dormitory, \$3.00 per month for each student (care of room included); the woman's building and the woman's cottage, \$3.00 per month for each student. Room rent must be paid in advance for each semester.

Rooms will be assigned to the three upper classes of the University at the end of the year in the order of seniority. The remaining rooms will be assigned at the beginning of the fall semester. Students who have engaged rooms must occupy them as early as the first day of the semester, or present satisfactory excuse for absence to the Secretary; otherwise they will be considered as not engaged. Occupants of rooms will be held responsible for damage. Before taking possession of rooms in the men's dormitory, each student will deposit with the Secretary of the Board of Regents \$5.00. The money will be returned upon vacating the room, less such portion thereof as may have been set aside for repairing damages. Facilities for obtaining furniture and supplies are abundant in Boulder, and the rates are reasonable.

Each of the women's dormitories is under the supervision of a matron. The men's dormitory is governed by a House Committee, elected by the students residing there; this committee acts in conjunction with a committee of the Faculty.

EXPENSES

Students not living on the campus may obtain room and board in private families at \$4.50 per week and upward. These rates may be greatly reduced by the formation of students' boarding clubs. Recently a statement of expenses at the University was asked from the students. The items included room, board, laundry, books, and all other expenses except fees, tuition in the professional schools, railroad fare and clothing. Out of the whole number making returns ten per cent. reported an annual expenditure of less than \$125, thirty-one per cent. of less than \$200; eighty per cent. of less than \$350, and 97 per cent. of less than \$500.

SPECIAL RAILROAD RATES

The Colorado & Southern Railway and The Denver and Interurban Railway sell students' commutation tickets at the following rates:

8-RIDE TICKETS—30-DAY STUDENTS' COMMUTATION.

| From Boulder, Colo., to | Rate.  |
|-------------------------|--------|
| Berthoud, Colo. ....    | \$3.25 |
| Denver, Colo. ....      | 4.00   |
| Lafayette, Colo. ....   | 3.00   |
| Longmont, Colo. ....    | 2.80   |
| Louisville, Colo. ....  | 2.50   |
| Loveland, Colo. ....    | 4.50   |

The limit of these tickets is 30 days from date of sale, and they are not extended on any account, nor is any unused portion of them redeemed.

These tickets will be sold only on presentation of students' identification card (permit form 4), properly signed by the Secretary of the State University, to the person named thereon, and will only be good when presented with such permit and only for the transportation of the student named thereon.

Other commutation rates are also made for daily trips between above-named stations.



## TUITION AND FEES

## COLLEGES OF LIBERAL ARTS, COMMERCE, AND EDUCATION.

|                                                                                                                                                                                                                                                 |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Matriculation (paid once) .....                                                                                                                                                                                                                 | \$ 5.00 |
| Tuition, resident, per year.....                                                                                                                                                                                                                | 15.00   |
| Tuition, non-resident, per year.....                                                                                                                                                                                                            | 25.00   |
| Laboratory fees per semester [Collected only from students who take the particular courses. The following fees include breakage deposits, etc., as well as charges for material, hence are in part returnable, if the student exercises care.]. |         |
| Physics, all laboratory courses, 50 per cent. returnable.                                                                                                                                                                                       | 2.00    |
| Chemistry [Lecture hours are not counted.]                                                                                                                                                                                                      |         |
| General Inorganic, per credit hour, 25 per cent. returnable .....                                                                                                                                                                               | 3.00    |
| Qualitative Analysis, per credit hour, 25 per cent. returnable .....                                                                                                                                                                            | 3.00    |
| Organic Preparations, per credit hour, 25 per cent. returnable .....                                                                                                                                                                            | 3.00    |
| All other courses, per credit hour, 25 per cent. returnable. . . . .                                                                                                                                                                            | 1.50    |
| Biology:                                                                                                                                                                                                                                        |         |
| Botany, any course, 25 per cent. returnable.....                                                                                                                                                                                                | 2.00    |
| Zoology, any course, 25 per cent. returnable.....                                                                                                                                                                                               | 3.00    |
| Histology and Embryology, 25 per cent. returnable...                                                                                                                                                                                            | 2.50    |
| Education:                                                                                                                                                                                                                                      |         |
| Pedagogical Library Fee for each Pedagogical Course requiring duplicate books.....                                                                                                                                                              | 1.00    |
| Geology:                                                                                                                                                                                                                                        |         |
| General Geology, 60 per cent. returnable.....                                                                                                                                                                                                   | 5.00    |
| Mineralogy, 25 per cent returnable.....                                                                                                                                                                                                         | 6.00    |
| Quantitative Mineralogy, 25 per cent. returnable....                                                                                                                                                                                            | 6.00    |

## GRADUATE SCHOOL.

|                                 |       |
|---------------------------------|-------|
| Matriculation (paid once) ..... | 10.00 |
| Diploma fee. ....               | 10.00 |

## COLLEGE OF ENGINEERING.

|                                         |       |
|-----------------------------------------|-------|
| Matriculation (paid once). ....         | 5.00  |
| Tuition, resident, per year.....        | 15.00 |
| Tuition, non-resident, per year.....    | 25.00 |
| Fees, for material, etc., per year..... | 10.00 |

SCHOOL OF MEDICINE.

Tuition, per year.....\$75.00

SCHOOL OF LAW.

Tuition, per year. .... 50.00

ASSOCIATED STUDENTS.

Annual fee for all students in all the Colleges and Schools  
[Recommended by the "Associated Students"; devoted entirely to student interests; entitles each student to free admission to all local events held under the auspices of the Associated Students, to copy of college weekly, etc. See "Associated Students," page 48.] ..... 5.00



# COLLEGE OF LIBERAL ARTS

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## FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

\* FRED B. R. HELLEMS, Ph.D., Dean,  
Professor of Latin.

J. RAYMOND BRACKETT, Ph.D.,  
Dean of the Graduate School; Professor of Comparative and English  
Literature.

IRA M. DELONG, M.A.,  
Professor of Mathematics.

CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

GEORGE NORLIN, Ph.D.,  
Professor of Greek.

FRANCIS RAMALEY, Ph.D.,  
Professor of Biology.

MELANCHTHON F. LIBBY, Ph.D.,  
Professor of Philosophy.

JOHN B. PHILLIPS, Ph.D.,  
Secretary of the College of Commerce; Professor of Economics and  
Sociology.

\* JOHN BERNARD EKELEY, Ph.D.,  
Professor of Chemistry.

WALTER RUNGE, Ph.D.,  
Acting Professor of Chemistry.

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\* On leave of absence, 1909-1910.

RUSSELL D. GEORGE, M.A.,  
Professor of Geology.

THEODORE D. A. COCKERELL,  
Professor of Systematic Zoology.

GEORGE M. CHADWICK,  
Professor of Music.

JAMES F. WILLARD, Ph.D.,  
Professor of History.

VIVIAN A. C. HENMON, Ph.D., Acting Dean,  
Professor of Psychology and Education.

OLIVER C. LESTER, Ph.D.,  
Professor of Physics.

FRANK E. THOMPSON, B.A.,  
Secretary of the College of Education; Professor of Education.

JUNIUS HENDERSON, B.A.,  
Professor of Natural History and Curator of Museum.

JOHN S. McLUCAS, M.A.,  
Professor of English.

GRACE FLEMING VAN SWERINGEN, Ph.D.,  
Professor of German.

MILO G. DERHAM, Ph.D.,  
Assistant Professor of Latin; Acting Professor.

SAUL EPSTEEN, Ph.D.,  
Secretary of the Graduate School; Assistant Professor of Mathematics

RALPH D. CRAWFORD, M.A.,  
Assistant Professor of Geology.

MARTHA G. McCAULLEY, M.A.,  
Assistant Professor of Literature; Dean of Women.

FORDYCE P. CLEAVES, M.A.,  
Instructor in Oratory.

CHARLES B. DYKE, M.A.,  
Instructor in Education.

HENRY A. HARTMAN, Ph.D.,  
Instructor in Education.

ARTHUR L. TATUM, M.S.,  
Instructor in Chemistry.



SAMUEL C. BLACK, M.A., D.D.,  
Instructor in Hebrew.

MARGARET S. CARRIET, M.A.,  
Instructor in English.

JOSEPH L. KINGSBURY, B.A.,  
Instructor in History.

WHITFORD H. SHELTON, Ph.B.,  
Instructor in Romance Languages.

WILFRED W. ROBBINS, M.A.,  
Instructor in Biology.

HARRY A. CURTIS, B.S. (Ch.E.),  
Instructor in Chemistry.

ADOLPH G. PIERROT, Ph.B.,  
Instructor in English.

WILLIAM R. BRACKETT, B.A.,  
Instructor in Physics.

CLYDE L. KING, M.A.,  
Instructor in Economics and Sociology.

ELLEN C. JACKSON, B.D., B.A.,  
Instructor in Latin.

MILDRED S. MCARTHUR, M.A.,  
Instructor in German.

DAVID J. MACDONALD, M.A.,  
Instructor in Education.

HAMPARTSOOM H. DER HAROOTUNIAN, B.A.,  
Instructor in Mathematics.

ALBERT N. GILBERTSON, M.A.,  
Instructor in Psychology.

A. BERNICE PICKETT,  
Assistant in Latin.

CLEOPHILE BELL, M.A.,  
Assistant in Comparative and English Literature.

JESSE W. CURENS, M.A.,  
Assistant in Comparative and English Literature.

JOHN G. TODD,  
Assistant in Romance Languages.

LOUISE FALK, B.A.,  
Assistant in Biology.

JOHN E. GUTBERLET,  
Assistant in Biology.

RALPH L. CARR,  
Assistant in Philosophy.

EARL B. MILLARD,  
Assistant in Chemistry.

GEORGE B. PACKARD,  
Assistant in Chemistry.

CHARLES F. POE,  
Chemistry Stock Room.

HORACE A. HOLLADAY,  
Chemistry Stock Room.

PHILIP G. WORCESTER, B.A.,  
Assistant in Geology.

ROY M. BUTTERS, B.A.,  
Assistant in Geology.

ELIZABETH BRUSH,  
Assistant in History.

MARY E. LAKENAN,  
Assistant in Psychology.

FREDERICK V. BLISS, B.S. (E.E.),  
Assistant in Physics.

CORNELIUS J. MARVIN,  
Assistant in Physics.

EASLEY S. JONES, M.A.,  
Assistant in English.

B. INES STEARNS,  
Assistant in English.

FERD J. LOCKHART,  
Assistant in English.

BESSIE BAKER, B.S.,  
Assistant in English.

LOUISA LEHRITTER,  
Assistant in German.

ROSE E. KENNEDY, B.A.,  
Assistant in German.

# COURSES OF STUDY

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## INTRODUCTORY

In connection with the new requirements for graduation the following general tendencies may be noted. An attempt has been made to map out, instead of the old elective plan, an intelligent and reasonable group system, which shall leave adequate freedom for individual needs and abilities, and, at the same time, prevent undesirable scattering of the student's energies. Provision is made for a combination of certain fundamental subjects and free electives with special work that shall be more scholarly and more finally valuable both for cultural attainments and scientific efficiency. In accordance with the latter idea students are required to take a large part of their group electives in their Junior and Senior years when it is possible to do real University work leading to the attainment of considerable knowledge and real power in some special line.

Moreover, the plan adapts itself readily to the needs of students who are looking forward to further work in professional and technical schools. Thus, within the College of Liberal Arts itself provision is made for a College of Commerce with various subdivisions and for a College of Education. By combining work in the College of Liberal Arts with work in the technical schools the student may attain the degree of B.A. and either the degree of B.S. in the College of Engineering, or the degree of LL.B. in the School of Law, or the degree of M.D. in the School of Medicine, in six years. In summary, then, we have a group system so arranged that the first two years in the College of Liberal Arts provide alike a foundation for more advanced work along University lines and a sound preparation for courses in the technical and professional schools. This latter phase of the plan is in accordance with the growing conviction that the College Course must do its part in the genuine preparation of students for a vocation, as well as offer every opportunity for the acquiring of a liberal education in the most enlightened sense of the word.

For the purposes of the present group system the various subjects are arranged as follows:

- I. DIVISION OF LETTERS: 6 groups.
- II. DIVISION OF SCIENCES: 7 groups.
- III. DIVISION OF PHILOSOPHY: 3 groups.
- IV. DIVISION OF HISTORY AND ECONOMICS: 2 groups.

With the same general purpose in view, but elaborately carried out, the College of Commerce and the College of Education have been established

V. DIVISION OF COMMERCE, organized as the College of Commerce: 4 groups as follows: 1. Banking; 2. Manufacturing; 3. Journalism; 4. Trade, Transportation, Consular Service.

VI. DIVISION OF EDUCATION, organized as the College of Education: a professional group, and groups corresponding to those of the College of Liberal Arts.

Here may also be noted the arrangement for obtaining two degrees in six years by crediting courses in the professional schools as a substitute for the groups and electives of the last two years—an extension of the group system. See page 113.

- VII. ENGINEERING SUBJECTS: equivalent of two years.
- VIII. LAW SUBJECTS: equivalent of one year.
- IX. MEDICAL SUBJECTS: equivalent of two years.

## REQUIREMENTS FOR ADMISSION

See page 53.

## REQUIREMENTS FOR GRADUATION.

To attain the degree of Bachelor of Arts students must complete one hundred and twenty hours according to the schedule printed below.

Attention is called to the following points:

- 1. Students must take fifty hours in some scheduled group; of these fifty hours they shall take at least thirty in the Junior and Senior years.
- 2. They may be allowed to substitute four hours of Literature for the required Composition of the Sophomore year, on recommendation



of the head of the Department of English Language, if they attain a satisfactory grade in English Composition of the Freshman year.

3. Students taking ten hours of either classics, mathematics, or science in the Freshman year, shall choose five hours in one of the other groups named, in the Sophomore year.

NOTE.—The various branches taught in the College of Liberal Arts are offered in courses of study. A *five-hour course*, as here used, means *five* exercises a week throughout a semester; a course in which the class meets the instructor *once* a week is a *one-hour course*. Three *five-hour courses* successfully pursued for one semester would entitle the student to *fifteen* hours' credit; for one year, to *thirty* hours' credit; and so on.

Freshmen students regularly take fifteen or sixteen hours per week, sophomore students seventeen, and upper classmen sixteen.

On a day appointed before the close of each semester all students are required to record their election of studies for the next semester. Credit will be granted for such studies only as have been approved by the Committee on Courses. No student will be permitted to change his course, or drop any study, except by vote of the Committee on Courses.

## SCHEDULE

### FRESHMAN YEAR

|                                           |          |
|-------------------------------------------|----------|
| 1. ENGLISH LANGUAGE .....                 | 6 hours  |
| *2. CLASSICS, MATHEMATICS OR SCIENCE..... | 10 hours |
| 3. HISTORY OR ECONOMICS.....              | 6 hours  |
| 4. FREE ELECTIVES (8 or 10 hours).....    | 8 hours  |
|                                           | <hr/>    |
|                                           | 30 hours |

### SOPHOMORE YEAR

|                                           |          |
|-------------------------------------------|----------|
| 5. ENGLISH LANGUAGE OR LITERATURE.....    | 4 hours  |
| *6. CLASSICS, MATHEMATICS OR SCIENCE..... | 5 hours  |
| 7. PSYCHOLOGY OR PHILOSOPHY.....          | 5 hours  |
| 8. GROUP ELECTIVES (Major or Minor).....  | 10 hours |
| 9. FREE ELECTIVES (6 or 8 hours).....     | 6 hours  |
|                                           | <hr/>    |
|                                           | 30 hours |

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\* To be in different groups, e. g., if ten hours of classics are elected in the Freshman year, then five hours of Mathematics or Science must be elected in the Sophomore year.

## JUNIOR YEAR

10. GROUP ELECTIVES (Major or Minor) . . . . . 20-15 hours

11. FREE ELECTIVES . . . . . 10-15 hours

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 30 hours

## SENIOR YEAR

12. GROUP ELECTIVES (Major or Minor) . . . . . 20-15 hours

13. FREE ELECTIVES . . . . . 10-15 hours

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 30 hours

## GROUPS

## I. DIVISION OF LETTERS

|                         |          |                                                          |
|-------------------------|----------|----------------------------------------------------------|
| GROUP (a) Major, Latin; | Minors { | Greek,<br>European History,<br>History of<br>Philosophy. |
|-------------------------|----------|----------------------------------------------------------|

|                         |          |                                                            |
|-------------------------|----------|------------------------------------------------------------|
| GROUP (b) Major, Greek; | Minors { | Latin,<br>English Literature,<br>History of<br>Philosophy. |
|-------------------------|----------|------------------------------------------------------------|

|                          |          |                     |
|--------------------------|----------|---------------------|
| GROUP (c) Major, German; | Minors { | French,<br>History. |
|--------------------------|----------|---------------------|

|                   |                       |          |                   |
|-------------------|-----------------------|----------|-------------------|
| GROUP (d) Major { | Romance<br>Languages; | Minors { | Latin,<br>German. |
|-------------------|-----------------------|----------|-------------------|

|                   |                                                |          |                               |
|-------------------|------------------------------------------------|----------|-------------------------------|
| GROUP (e) Major { | Compara-<br>tive and<br>English<br>Literature; | Minors { | History,<br>English Language. |
|-------------------|------------------------------------------------|----------|-------------------------------|

|                   |                      |          |                                         |
|-------------------|----------------------|----------|-----------------------------------------|
| GROUP (f) Major { | English<br>Language; | Minors { | English Literature,<br>English History. |
|-------------------|----------------------|----------|-----------------------------------------|

## II. DIVISION OF SCIENCES

|                               |        |                                                      |
|-------------------------------|--------|------------------------------------------------------|
| GROUP (g) Major, Mathematics; | Minors | { Physics,<br>Astronomy.                             |
| GROUP (h) Major, Chemistry;   | Minors | { Physics,<br>Mathematics.                           |
| GROUP (i) Major, Physics;     | Minors | { Mathematics,<br>Chemistry.                         |
| GROUP (j) Major, Botany;      | Minors | { Zoology,<br>Chemistry,<br>Geology.                 |
| GROUP (k) Major, Zoology;     | Minors | { Botany,<br>Chemistry,<br>Geology.                  |
| GROUP (l) Major, Geology;     | Minors | { Mineralogy,<br>Chemistry,<br>Physics,<br>Zoology.  |
| GROUP (m) Major, Mineralogy;  | Minors | { Geology,<br>Chemistry,<br>Physics,<br>Mathematics. |

## III. DIVISION OF PHILOSOPHY

|                              |        |                           |
|------------------------------|--------|---------------------------|
| GROUP (n) Major, Philosophy; | Minors | { Psychology,<br>Biology. |
| GROUP (o) Major, Psychology; | Minors | { Philosophy,<br>Biology. |
| GROUP (p) Major, Education;  | Minors | { Psychology,<br>Biology. |

## IV. DIVISION OF HISTORY AND ECONOMICS

|                           |                                  |                               |
|---------------------------|----------------------------------|-------------------------------|
| GROUP (q) Major, History; | Minors                           | { Economics and<br>Sociology. |
| GROUP (r) Major           | { Economics<br>and<br>Sociology; | Minor History.                |

# EQUIPMENT

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## LABORATORIES

**THE PHYSICAL LABORATORY**—The Department of Physics occupies the entire first floor, two hundred feet by sixty feet, of the Hale Science Building, with a large modern lecture room on the second floor. The laboratories are large and well supplied with gas, water, direct and alternating current, and the ordinary apparatus for students' use. There are rooms for advanced and research work equipped with special apparatus particularly in light and electricity. A well equipped shop and a department library also add greatly to the efficiency of the department.

**CHEMICAL LABORATORY**—The basement of the Chemistry Building contains a laboratory for organic and physiological chemistry, a laboratory for inorganic preparations and for assaying, a laboratory for sanitary water analysis, a room for spectroscopic work, and the main stock and acid room. On the first floor are the laboratories for general chemistry and for qualitative analysis, a private laboratory, a laboratory for quantitative analysis, a balance room, a combustion room, and the stock distributing room. The second floor contains the main lecture room with an amphitheatre seating two hundred and fifty people; the lecture desk is supplied with water, gas, suction pumps, draught, and electric current; on this floor also are a room for the storage of lecture apparatus, a smaller lecture room seating eighty students, the chemical library, the professor's study and private laboratory, a laboratory for technical and gas analysis, and a laboratory for physical and electrochemistry. Each desk in the various laboratories is equipped with gas, water, and sink, and, in the organic laboratory, with suction pumps. The ventilation is accomplished by the direct-indirect system, assisted by the hoods and a three horse-power electric motor and rotary fan. The laboratories for physical and advanced analytical chemistry are fitted up with the proper apparatus for thorough experimental work in these sub-

jects. The chemical library, to which students in the laboratories have access at any time, is considered one of the best in the West.

**BIOLOGICAL LABORATORY**—The Biological Laboratory occupies the third floor of the Hale Science Building. There are a large general laboratory, a special laboratory for advanced work, a stock room, a preparation room, herbarium, a lecture room, and two private rooms for the professors. The laboratory is provided with thirty-four microscopes, four microtomes, water baths, glassware, reagents, etc. A series of embryological models of the latest pattern and a limited number of models for teaching histology are provided. There is a limited amount of apparatus for work in plant physiology, as auxanometer, centrifugal, klinostat, etc. Instruments for field work in plant and animal ecology are provided. There are two thermographs, a psychrograph, and sets of thermometers, geotomes, photometers, etc. An electric arc lantern is used for projections. The collection of lantern slides is a large one and especially adapted for teaching the botany and zoology of the Rocky Mountain region.

**GEOLOGICAL AND MINERALOGICAL LABORATORY**—A laboratory in the Department of Geology provides accommodation for students in determinative mineralogy. The desks are furnished with blow pipe equipment and other determinative apparatus and reagents. Four petrographical microscopes of the most approved type are available for optical mineralogy and petrography. A reflective goniometer and a machine for cutting sections of rocks and minerals have been added to the laboratory equipment of the Department. Equipment for advanced field work and geologic mapping include traverse plane tables, Brunton pocket transits, aneroid barometers, Locke and Abney levels, steel tapes, a Stewart telemeter, drawing tables, pantagraph and planimeter. The library of the Department contains 2,500 volumes, and is being added to yearly.

The west wing of a new fire-proof science building is under construction, and will house the departments of Geology and Mineralogy.

**THE PSYCHOLOGICAL LABORATORY**—The Psychological Laboratory occupies two rooms on the third floor of the Main Building. It is well equipped for instruction and training in physiological and experimental psychology. The equipment includes the apparatus necessary for general training courses in psychology and psychological methods, chronographs and recording appliances of various kinds, microscopic and lantern slides of brain sections, models, charts, a complete set of anthropo-



metric instruments, etc. Instruments are provided for typical experiments in psychophysics, sensation, perception, association, reaction, and movement. Constant additions are being made to the equipment.

## MUSEUM AND CABINETS

THE ZOOLOGICAL COLLECTIONS include vertebrate skeletons and skulls, mounted mammals and study skins, mounted birds and study skins, eggs and nests, fishes, reptiles, amphibians, crustaceans, insects and mollusks. Especially important is the large collection of land, fresh-water and marine shells, particularly rich in Colorado and Pacific Coast material, and fresh-water fishes from various parts of the world.

THE BOTANICAL COLLECTION consists of a large series of mounted specimens, including seed plants, lichens, fungi and algæ, a display case of tropical seeds and fruits, a representative series of tropical woods and a collection of economic woods of the United States.

THE GUGGENHEIM BIOLOGICAL COLLECTION, purchased with funds placed at the disposal of the Board of Regents by Honorable Simon Guggenheim, United States Senator from Colorado, consists of a fine series of the nests and eggs of birds taken by Mr. Denis Gale at various altitudes, in Colorado, with the accompanying field notes; also of a valuable collection of mounted birds and mammals, chiefly from Colorado and adjacent states.

THE MINERALOGICAL AND GEOLOGICAL COLLECTION consists of a large series of typical rocks, minerals, Colorado ores, microscope sections of rocks, ores and minerals, wooden models of crystals, etc. They include both display and study specimens.

THE GUGGENHEIM MINERAL COLLECTION, the gift of Honorable Simon Guggenheim, consists of over 1,000 carefully selected type mineral specimens, which will be kept together for reference. It includes a large number of rare minerals not common in university cabinets, and is an extremely valuable addition to the equipment of the Department of Geology.

ETHNOLOGICAL COLLECTIONS—A beginning has been made in the collection of ethnological material, chiefly local, that from the cliff dwellings collected under the direction of Dr. Edgar L. Hewett, being excellent for the illustration of the ancient culture of that region.

THE PHOTOGRAPH AND LANTERN SLIDE CABINETS of the Biology and Geology departments and Museum contain several thousand negatives, prints and lantern slides illustrating various biological and geological phenomena.

THE PALEONTOLOGICAL COLLECTIONS contain great quantities of Colorado marine invertebrates, very large numbers of Tertiary insects and plants from the Lake Beds of Florissant, Colorado, Cretaceous plants from various parts of the state and from Kansas, Paleozoic plants from the Coal Measures of the eastern states, several thousand Tertiary and Pleistocene marine invertebrates from the Atlantic and Pacific coasts, a representative collection of Paleozoic invertebrates from the eastern states and Mississippi Valley, a fine series of Mesozoic fossils from Europe and a few important fossil vertebrates, mostly from Colorado.

THE MUSEUM is temporarily located in the Hale Science Building, and contains the paleontological, biological and ethnological cabinets and part of the geological collections. A large portion of the material hereinbefore described is considered a part of the Museum, though some of the most valuable study collections belong to the Biology and Geology departments, and all of the material in the Museum is intended for the use of the various teaching departments, of the general public and of specialists working upon lines represented in the collections. About forty display cases contain suitable material on exhibition, the balance being in drawer cabinets, where it may be examined by students and others interested. Large quantities of duplicates are being collected for class use, research and exchange purposes. The Museum is at present the depository of the collections of the Colorado Geological Survey. Several loan collections are also in the cabinets.

For a number of years the nominal curator of the Museum, with members of the faculty and volunteer assistants, has been making short trips to various parts of the state for the purpose of collecting specimens and studying the natural phenomena of Colorado, and the material and notes thus obtained have formed the basis, wholly or in part, of many publications upon natural history subjects, which have appeared in *The University of Colorado Studies* and other periodicals. Early in 1909 arrangements were made for the Curator to devote his whole time to building up the Museum.

Among notable additions to the collections during 1909 were the following: over 12,000 recent and fossil shells from California, collected

chiefly by the Curator and his wife; a large collection of fossil and recent biological material obtained in northwestern Colorado by members of the faculty and volunteer assistants; botanical and zoological material collected in central Colorado by the faculty and students of the Summer Biological Laboratory at Tolland; a series of Tertiary fossils collected by Professor Theodore D. A. Cockerell, at Eningen, Baden; a very fine series of fossil crinoids donated by Mr. Frank Springer, a noted authority on that group; Egyptian fishes donated by the Egyptian government through the British Museum; fishes from Japan and other regions donated by Dr. Davis S. Jordan; an excellent display collection of British fossils received from the University of Cambridge, England, in exchange for Colorado material; besides numerous smaller, but much appreciated, donations. The rapid increase in department and Museum material is due in large measure to friends of the University. Among the donors may be mentioned D. M. Andrews, E. L. Aurand, H. A. Aurand, J. P. Beatty, R. N. Bell, E. Bethel, John J. Blanchard, L. C. Bragg, T. D. A. Cockerell, Mrs. Louis Dyke, S. A. Easton, J. P. Flynn, R. D. George, J. P. Grant, Wm. H. Hyde, Keeler Bros., W. J. King, Mrs. Anna Lidle, E. B. Lynch, F. M. Manshardt, Max Meyer, William McArthur, Allen McArthur, Estate of Abraham Nell, Dr. Eugene Penard (Eningen fossils and a valuable series of Protozoa slides), E. G. Pryce, Sievert A. Rohwer, C. C. Smith, Carl Strock, H. D. Thompson, Dr. E. B. Trovillion, U. S. Fish Commission, United Oil Co., through M. T. Rathvon, F. H. Wolcott, P. G. Worcester, Andrew Wilbur.

## ART COLLECTIONS

THE PHILLIPS ART COLLECTION is named from the donors, Mr. and Mrs. Ivers Phillips, of Boulder. It is contained in two rooms of the second floor of the Main Building and one of the third floor. Room 23 is devoted to the Dutch, German, French and English schools of painting; room 24 to Italian and Spanish painting; room 31 to architecture and sculpture. The masters of painting are represented by Braun autotypes, framed in oak under glass; some are of the largest size ever produced, and all are inalterable in carbon. The works in architecture and sculpture are represented by large photographic reproductions, casts and several hundred glass transparencies. The finest casts are Henning's restoration of the entire Parthenon frieze with that sculptor's designs for the missing slabs; the Portland vase in color; the vase of Sosibius; heads from Trajan's column; bas-reliefs by Donatello, Michelangelo,

Flaxman and Wyon; Madonnas by Lucca della Robbia and Michelangelo; heads of Sappho, Juno, Jupiter, Minerva, Eros, Niobe, and the Hermes of Praxiteles; full size statutes of Narcissus, Hermes, Apollo Belvidere, Diana of Versailles, Venus de Medici, etc.

Persons willing to contribute to a museum or library of fine arts are requested to confer with the curator, Professor J. Raymond Brackett.

Lectures covering the main subjects illustrated in the collection will be given in the department of Comparative and English Literature; see also courses in Greek and Roman Archæology. In 1910 Professor Lewis Frederick Pilcher of Vassar College gave a course of five lectures on problems in Greek sculpture and a course of seven lectures on the psychology of Art.

THE FARNSWORTH COLLECTION OF COINS was given to the University by Dr. Wilson A. Farnsworth, of Cæsarea, Cappadocia. It consists of some three hundred and fifty Greek, Roman, Byzantine, Mediæval, and modern coins. The Greek coins illustrate autonomous, regal and imperial series, and are of silver and bronze; among them are rare coins from Egypt, Syria, Asia Minor, Macedonia and Greece. The Roman coins illustrate family and imperial series of silver and bronze. The collection is on exhibition in the rooms of the Greek department.

GREEK PHOTOGRAPHS—The department of Greek has added to its equipment a collection, almost complete, of photographs of sculptures in the Museum at Athens, as well as excellent photographs of representative statuary in the principal museums of Europe. The department has also a collection of more than two hundred photographs illustrating the scenery of Greece. From most of these, lantern slides have been made.

### ARCHAEOLOGICAL INVESTIGATIONS

The University of Colorado is undertaking, in collaboration with the School of American Archæology, a series of studies in the ancient culture history of the State. A field expedition was conducted in the McElmo district in Montezuma County in 1908. A group of ancient ruins was excavated and the material obtained will be placed in the University Museum. Students of the University were offered the opportunity here afforded for field work. The University is also assisting in the compilation of a record of all the archæological sites in the State.

A course of thirty lectures on American Archæology was given in

1909-1910 at the University by officers of the School of American Archaeology. The course included twenty lectures on "The Indians of the Southwest," by J. P. Harrington, February 7th to March 7th, and ten lectures by Dr. Edgar L. Hewitt, Director of the School of American Archaeology, on "Introduction to American Archaeology," May 9th to 20th.

### ORDER OF DESCRIPTION OF COURSES

The various courses offered in the College of Liberal Arts are described in the following order:

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Greek.                              | Chemistry.                             |
| Latin.                              | Biology.                               |
| Hebrew.                             | Geology and Mineralogy.                |
| German Language and Literature.     | Philosophy, Logic and Ethics.          |
| Romance Languages—French,           | Psychology.                            |
| Spanish, Italian.                   | Education.                             |
| Comparative and English Literature. | History.                               |
| English Language.                   | Economics, Sociology.                  |
| Oratory and Expressive Reading.     | Music.                                 |
| Mathematics.                        | Electives in the Professional Schools. |
| Physics.                            |                                        |



## \*DESCRIPTION OF COURSES

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### GREEK

- †1-2. ELEMENTARY COURSE. *First and second semesters.* 11:00. 5 h.  
*each semester.*  
Goodwin's Grammar and Xenophon's Anabasis.
- †3. HOMER'S ODYSSEY. *First semester.* 9:00. 3 h.  
Careful study of selected books.
- †4. LYSIAS' ORATIONS AND REVIEW OF GREEK GRAMMAR. *First semester.* 9:00. 2 h. *For freshmen.*
5. HISTORY OF ATHENS. *First semester.* 9:00. 3 h. *Open to all.*  
Lectures with assigned readings on the constitutional, political and literary history of the Ancient City. No reading of Greek required.
6. PLATO. *Second semester.* 9:00. 3 h. *For freshmen.*  
The Apology and Crito with selections from the Phædo.
7. TRAGEDY. *Second semester.* 9:00. 2 h. *For freshmen.*  
Sophocles' Antigone or Euripides' Medea with introductory lectures on the Greek Drama.
8. PLATO. *First semester.* 11:30. 3 h.  
Rapid reading of selections.
9. ARISTOPHANES. *First semester.* 11:30. 2 h.  
Selected comedies.
10. DEMOSTHENES. *First semester.* 10:00. 3 h.  
Oration on the crown.

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\* Courses for Graduates only are listed and described under Graduate School.

† Courses 1-2 are offered for students who come to the University without preparation in Greek. Upon the completion of these courses they are prepared to enter courses 3 and 4. Courses 3 and 4 are also for freshmen who enter the University with at least two units of Greek.

11. PASTORAL POETRY. *First semester.* 10:00. 2 h.  
Theocritus, Bion and Moschus.
12. PLATO. *Second semester.* 10:00. 3 h.  
Interpretation of the Republic with lectures on Platonism.
13. THUCYDIDES. *Second semester.* 10:00. 2 h.  
Selected books.
14. LYRIC POETRY. *First semester.* 10:00. 3 h.  
Early Lyric Poets, with introduction to Pindar and Bacchylides.
15. TRAGEDY. *First semester.* 10:00. 2 h.  
Advanced course; Æschylus and Euripides.
6. PROSE COMPOSITION. *Second semester.* 11:00. 2 h.
7. ARISTOTLE'S POETICS. *Second semester.* 2:30. 1 h.
8. HISTORY OF GREEK LITERATURE. *First semester.* 3:30. 3 h.  
Lectures with reading of best English translations of Greek authors.
9. HISTORY OF GREEK LITERATURE. *Second semester.* 3:30. 2 h.  
Continuation of 18.
0. HISTORY OF GREEK ART. *First semester.* 2:30. 2 h.
1. CLASSICAL MYTHOLOGY. *Second semester.* 3:30. 2 h.  
Lectures and readings; interpretation of myths.

For courses for graduates only, see page 137.

## LATIN

1. CICERO. *First semester.* 11:30. 3 h.  
Cicero, De Senectute, De Amicitia; the relation of these works to Cicero's other writings. Latin grammar, prose composition.
2. OVID. *First semester.* 11:30. 2 h.  
Selections from Ovid; the influence of Ovid on modern literature; introduction to classical mythology.
3. LIVY. *Second semester.* 11:30. 3 h.  
Selections from the earlier books; Latin prose composition.
4. TERENCE AND PLAUTUS. *Second semester.* 11:30. 2 h.  
One play of each author; the place of Terence and Plautus in literature; introduction to Roman comedy.
5. HORACE. *First semester.* 8:00. 3 h.  
The Odes and Epodes; introduction to Latin lyrical poetry; Latin versification.

6. LATIN PROSE. *First semester.* 8:00. 2 h.
7. TACITUS. *Second semester.* 8:00. 2 h.  
Tacitus, Agricola and Germania; the spread of Roman influence in the West.
8. LATIN PROSE AND SIGHT TRANSLATION. *Second semester.* 8:00 3 h.
9. LATIN LITERATURE. *Both semesters.* 2:30. 3 h.  
The outlines of the literature with its historical setting. The course is based on Latin selections.
10. ROMAN HISTORY. *First semester.* 10:00. 3 h.  
Outlines of Roman History; lectures and reports on the sources; the history of Rome from its foundation to 476 A. D.
11. ROMAN SATIRE. *First semester.* 8:00. 3 h.  
Horace, Juvenal, Persius; the origin and development of satire with a critical estimate of the historical value of the content.
12. TACITUS AND PLINY. *First semester.* 8:00. 2 h.  
Tacitus, Histories, book I; Pliny, Letters, book X; introduction to the prose of the Silver Latinity; Rome and the provinces.
13. ROMAN COMEDY. *First semester.* 1:30. 3 h.  
Terence and Plautus, six plays; a comparative study of these authors from the literary as well as the morphological side.
14. RHETORICAL TREATISES. 5 h.  
Horace, Arts Poetica; Cicero, De Oratore, Brutus; Quintillian, book X; Tacitus, Dialogus de Oratoribus; principles of literary criticism; the debt of the above writers to Greek sources.
15. CATULLUS. *First semester.* 11:30. 2 h.  
Latin lyrical poetry.
16. ROMAN PHILOSOPHY. 5 h.  
Lucretius, De Rerum Natura; Cicero, De Natura Deorum, De Finibus and Tusculanæ; Seneca, selections; the place of Roman philosophy in the history of philosophy; the part played by these writers individually.
17. ROMAN HISTORY. 63 B. C. to 37 A. D. 3 h.  
Sallust's Catiline; Cicero's Letters, (Abbot's selections); Tacitus, Annals, books I—VI; Velleius Patereculus, book II.
18. TIBULLUS AND PROPERTIUS. 2 h.  
Selected odes; special studies in Latin lyrical poetry.

## 19. MARTIAL AND PLINY. 2 h.

Selected epigrams and letters; private life under the early Roman Empire.

## 20. LATIN LITERATURE IN ENGLISH. 3 h.

The course is based on standard translations and is intended for students not taking Latin.

21. LIVY. 2 h. *For advanced students.*

Book I as a basis for the consideration of the problems of early Roman history.

## 22. SUETONIUS. 2 h.

Selected lives; introduction to the history of the Empire.

23. TEACHERS' TRAINING COURSE. *Second semester.* 3 h. *For advanced students.*

Lectures, reviews of text-books; practical work in teaching under supervision.

## 24. ADVANCED LATIN PROSE. 2 h.

Stylistic analysis of Latin authors; the writing of Latin prose; problems in syntax.

## 25. GREEK AND ROMAN ARCHÆOLOGY. 2 h.

An elementary course in architecture, sculpture and painting.

For courses for graduates only, see page 137.

### \*HEBREW

1. BEGINNER'S COURSE. *First semester.* 1:30. 3 h.

Introductory lectures on Semitic life and literature; study of Genesis, Chapters 1-8. Harper's Method and Manual with Elements of Hebrew. 1910.

2. COURSE 1 CONTINUED. *Second semester.* 8:00. 3 h.3. SECOND YEAR COURSE. *First semester.* 1:30. 3 h.

Introductory lectures on Semitic religions; review of grammar and syntax; translations in Old Testament histories. Kittells Text; Tregelles, Gesenius or Brown-Driver-Briggs Lexicon. 1911.

4. COURSE 2 CONTINUED. *Second semester.* 1:30. 3 h.

Translations in Psalms, Wisdom Literature, Minor Prophets.

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\* It is the object of this Department to give the student, in a two-year course, a good working knowledge of the Hebrew language and literature. It is designed especially to meet the wants of theological students, students preparing for missionary work, and those desiring to add this as a linguistic accomplishment. The Beginner's Course, given every second year, will begin in the fall of 1910.

## GERMAN LANGUAGE AND LITERATURE

- \*1-2. ELEMENTARY COURSE. *Both semesters.* 8:00 and 1:30. 5 h.  
Grammar, pronunciation, easy reading; practice in writing and speaking German.
- \*3-4. INTERMEDIATE COURSE. *Both semesters.* 8:00 and 10:00. 5 h.  
Reading of selected masterpieces of German literature, such as Lessing's *Minna von Barnhelm*, Schiller's *Jungfrau von Orleans*, Goethe's *Hermann und Dorothea*; exercises in writing German and in pronunciation.
5. LESSING AS A DRAMATIST. *First semester.* 3 h.  
Study of *Nathan der Weise* and *Emilia Galotti*.  
Prerequisite: course 3-4.
6. SCHILLER'S *WALLENSTEIN* AND *DIE BRAUT VON MESSINA*. *Second semester.* 3 h.  
Readings, recitations, and papers.  
Prerequisite: course 3-4.
7. GOETHE'S DRAMAS, EXCLUSIVE OF *FAUST*. *First semester.* 3 h.  
Prerequisite: course 5 or 6.
8. THE GERMAN DRAMA OF THE NINETEENTH CENTURY. *First semester.* 3 h. *Open to graduate students and seniors who read German with facility.*  
Reading of representative plays and discussion of the problems which they present. Not offered in 1910-1911.
9. GERMAN COMPOSITION. *Both semesters.* 2 h.
10. GERMAN CONVERSATION. *One semester.* 2 h.
11. GOETHE'S *FAUST*; PARTS I AND II. *Second semester.* 3 h. *Open to graduate students and seniors.*
12. STUDIES IN THE HISTORY OF THE GERMAN NOVEL. *One semester.* 3 h. *Open to seniors and juniors who read German with facility.*  
Reading and discussion of selected works. Not offered in 1910-1911.
13. THE GERMAN NOVELLE. *One semester.* 3 h. *Open to seniors and juniors who read German with facility.*  
Reading and discussion of representative stories.  
This course alternates with course 12.

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\* The aim of courses 1-4 is to prepare the student to read the German language with facility, and to understand German at hearing.



14. GERMAN LYRICS. *One semester. 2 h.*

Prerequisite: course 3-4.

15. GERMAN BALLADS. *One semester. 2 h.*

Prerequisite: course 3-4.

16. TEACHERS' COURSE. *Both semesters. 2 h.*

The phonetics and pronunciation of German; methods of teaching German to foreigners; examination of grammars and readers; systematic study of one of the texts usually read in high schools.

17. THE DRAMAS OF RICHARD WAGNER. *One semester. 2 h. Open to seniors and juniors who read German with facility.*

Not offered in 1910-1911.

For courses for graduates only, see page 139.

## ROMANCE LANGUAGES

### FRENCH

1. BEGINNER'S COURSE. *First semester. 10:00 and 1:30. 5 h.*

Thieme and Effinger's French Grammar; Super's French Reader; Matzke's Primer of French Pronunciation. A course in grammar, pronunciation and sight reading for students who present German for admission to College.

2. COURSE 1 CONTINUED. *Second semester. 10:00 and 1:30. 5 h.*

Reading of Modern French prose; phonetic drill; committing to memory of selected passages; prose composition.

3. SECOND-YEAR COURSE. *First semester. 9:00. 5 h.*

Modern French stories and plays to be selected from the works of Balzac, Daudet, Dumas, Feuillet, Pailleron, Maupaussant; selected lyrics; prose composition; daily themes.

4. SECOND-YEAR COURSE CONTINUED. *Second semester. 9:00. 5 h.*

One play each of Corneille, Racine, Victor Hugo, Molière; prose writings of the Romantic School; completion and review of French Grammar; prose composition twice a week.

5. THIRD-YEAR COURSE. *First semester. 10:00. 3 h.*

Systematic reading of authors or by topics to be selected from the following and given in the third and fourth years; Molière, Victor Hugo, Modern Drama, Classic Tragedy, Romantic School, Lyric Poetry. 1909-1910, Classic Tragedy; Francois's Advanced Prose Composition.

6. THIRD-YEAR COURSE. *Second semester.* 10:00. 3 h.  
1909-1910, Eighteenth Century Literature; Francois's Advanced Prose Composition.  
See course 5.
7. HISTORY OF FRENCH LITERATURE. *First semester.* 10:00. 2 h.  
Lectures and reports.  
From the beginnings to the reign of Francis I.
8. HISTORY OF FRENCH LITERATURE. *Second semester.* 10:00. 2 h.  
Lectures and reports.  
From the reign of Francis I. to the present time.

For courses for graduates only, see page 140.

#### SPANISH

1. BEGINNER'S COURSE. *First semester.* 9:00. 3 h.  
Hills & Ford's Spanish Grammar; Turrell's Spanish Reader; grammar, pronunciation and sight reading.
2. COURSE 1 CONTINUED. *Second semester.* 9:00. 3 h.  
Modern Spanish novels and plays; practical exercises in composition and conversation based on Butler's Spanish Teacher.
3. SECOND-YEAR COURSE. *First semester.* 11:30. 2 h.  
Reading of standard authors; completion and review of Spanish grammar; Gil Blas.
4. SECOND-YEAR COURSE. *Second semester.* 11:30. 2 h.  
Spanish drama, prose and poetry; prose composition; two plays of Echegaray, Valera's Pepita Jiminez.
5. LOPE DE VEGA AND CALDERON. *First semester.* 2 h.
6. ADVANCED PROSE COMPOSITION. *Second semester.* 1 h.

For courses for graduates only, see page 140.

#### ITALIAN

1. BEGINNER'S COURSE. *First semester.* 2:30. 3 h.  
Young's Italian Grammar; Bowen's Italian Readings; grammar, pronunciation and sight reading.
2. COURSE 1 CONTINUED. *Second semester.* 2:30. 3 h.  
Advanced composition; modern Italian novels and plays; De Amicis, La vita militare, three comedies of Goldoni.

3. DANTE'S DIVINE COMEDY. *First semester.* 2 h.
4. PETRARCH AND BOCACCIO. *Second semester.* 2 h.

For courses for graduates only, see page 140.

NOTICE—Students are recommended to take up the Romance Languages in the following order: French, Spanish, Italian. They should not elect courses simultaneously in Spanish and Italian without consulting the instructor.

## COMPARATIVE AND ENGLISH LITERATURE

- 1-2. HISTORY OF ENGLISH LITERATURE. *Throughout the year.* 5 h.  
*Open to sophomores who have finished the required English.* Dean McCaulley.
3. WORDSWORTH. *First semester. Tu. Th.* 2 h.
4. SHELLEY. *Second semester. Tu. Th.* 2 h.
5. TENNYSON. *First semester. Tu. Th. 11:30. For advanced students.*
6. BROWNING. *Second semester. Tu. Th. 11:30. For advanced students.*

The Globe edition of Tennyson; the Cambridge edition of Browning. The Seminary Library contains many volumes of valuable Tennysoniania presented by members of the class of 1896, and publications of the Browning Society. 1909.

Courses 5 and 6 require a preliminary training in literary method.

- 7-8. SHAKESPEARE. *Throughout the year. 10:00. 5 h. For advanced students and graduates.*

The Cambridge text of Shakespeare; Moulton's Shakespeare as a Dramatic Artist. 1910.

9. MILTON'S POETRY. 2 h. *For advanced students.* 1905.
10. ROBERT LOUIS STEVENSON. *Second semester. 2 h.* 1909. Dean McCaulley.
11. SHORT COURSE IN ENGLISH FICTION. *Second semester. M. W. F. 3 h.* 1908. Dean McCaulley.
- 12-13. COMPARATIVE LITERATURE; EARLY LITERATURE AND ART. *Throughout the year. 11:30. 3 h. Open to all.*

The lectures deal with the poetry of primitive peoples, of China, of Japan; with the special contributions to the evolution of litera-

ture made by Egypt, Babylonia, Judea, Arabia, India, Persia. The literature of each people is viewed in connection with other manifestations of the artistic impulse; the chief works in architecture, sculpture and painting. 1907.

- 14-15. THE EPIC. *Throughout the year.* 11:30. 3 h. *For graduates and undergraduates.*

The Iliad, the Odyssey and the Æneid; the Divine Comedy; the great epics of all ages (in English). 1909.

- 16-17. WORLD DRAMA. *Throughout the year.* 9:00. 5 h. *For graduates and advanced undergraduates.*

The development of the drama from the earliest times to the present; primitive drama; the literary drama of China, Japan, and India; the ancient classical drama; Calderon; Corneille, Racine, Molière, Victor Hugo; Lessing, Schiller, Goethe; Ibsen; Tolstoy; Echegaray; Rostand, Maeterlinck; D'Annunzio; Hauptmann, Sudermann. This is a reading course including one hundred and twenty-seven plays (in English). 1910.

- 18-19. THE GREAT DRAMA. *Throughout the year.* 9:00. 5 h. *For graduates and advanced undergraduates.*

The international aspects of the English drama; a reading course from the mystery plays to the twentieth century. 1910.

For courses for graduates only, see page 140.

## ENGLISH LANGUAGE

1. FRESHMAN ENGLISH. Eight sections. *Both semesters. M. W. F.* 8:00, 9:00, 10:00, 11:30. 3 h. *Required of all college freshmen.* Text-book, daily themes, oral exercises.
2. SOPHOMORE ENGLISH. *Both semesters. Tu., Th.* 9:00. 2 h.  
A continuation of course 1.
3. ADVANCED COMPOSITION. Two sections. *First semester. Tu. Th.* 10:00. 2 h. *Open only to those who have attained a grade of A or B in course 1.*
4. ADVANCED COMPOSITION. Two sections. *Second semester. Tu. Th.* 10:00. 2 h.  
See course 3.

5. ARGUMENTATION AND DEBATE. *First semester. M. W. F. 2:30. 3 h.*

At the end of the first semester seven students are selected from the membership of this class, to constitute the University debating squad. Those forming this squad will be given two additional credits. The course may be repeated, but no student shall receive more than a total of ten credits.

6. JOURNALISM. *Both semesters. M. W. F. 8:00. 3 h.*

Lectures, reports, practical work.

7. HISTORY OF THE ENGLISH LANGUAGE. *Hours to be arranged. 2 h.*

Brief review of linguistics and of the relations of the Indo-European languages; history of English grammatical forms, sentence structure and vocabulary.

8. ANGLO-SAXON. *First semester. Tu. Th. 9:00. 2 h.*

Bright's Anglo-Saxon Reader.

9. ANGLO-SAXON. *Second semester. Tu. Th. 9:00. 2 h.*

Beowulf and other Anglo-Saxon poems.

10. MIDDLE ENGLISH. *First semester. Tu. Th. 11:30. 2 h.*

Emerson's Middle English Reader; supplementary reading, lectures, reports. Not given in 1909-1910.

11. CHAUCER. *Second semester. Tu. Th. 11:30. 2 h. Not open to freshmen.*

Skeat's Texts of Canterbury Tales, lectures and reports. Not given in 1909-1910.

12. SHAKESPEARE. *First semester. M. W. F. 11:30. 3 h. Not open to freshmen.*

Rolfe's Texts and Dowden's Primer. In 1909-1910, Two Gentlemen of Verona; Henry IV, parts 1 and 2; Twelfth Night.

13. SHAKESPEARE. *Second semester. M. W. F. 11:30. 3 h.*

A continuation of course 12. In 1909-1910, Julius Cæsar, Hamlet, Lear, Winter's Tale.

14. PRE-SHAKESPEAREAN DRAMA. *First semester. Tu. Th. 11:30. 2 h. Not open to freshmen.*

Manly's Specimens of Pre-Shakespearean Drama, lectures, reports.

15. INTERPRETATION OF ENGLISH POETRY. *Second semester. Tu. Th. 11:30. 2 h. Not open to freshmen.*

Manly's English Poetry, lectures, reports.



## ORATORY AND EXPRESSIVE READING

Credit is given for each course.

1. PUBLIC SPEAKING. *First semester. W. or Th. 1:30. 1 h.*  
A course in the elements of public speaking, with weekly declamations and original orations.  
Emerson's Perfective Laws of Art, Vols. I and II.
2. PUBLIC SPEAKING. *Second semester. W. or Th. 1:30. 1 h.*  
A continuation of course 1.  
Extemporaneous speaking; briefs and forensics; Emerson's Perfective Laws of Art, Vols. III and IV.
3. ADVANCED ORATORY. *Both semesters. Hours to be arranged.*  
Special work with honor men, class and private, in preparation for contests.
4. DRAMATIC EXPRESSION. *First semester. W. or Th. 3:30. 1 h.*  
Theses written and delivered before class; dramatic criticism.  
Curry's Foundations of Expression.
5. DRAMATIC EXPRESSION. *Second semester. W. or Th. 3:30. 1 h.*  
Readings. Theses on dramatic subjects.  
Dramatic criticism; Shakespeare; Curry's Foundations of Expression.  
A continuation of course 4.
6. VOICE CULTURE AND ELOCUTION. *First semester. W. or Th. 2:30. 1 h.*  
Recitations and readings before class.  
Development of voice; personal appearance; drill in reading; Emerson's Evolution of Expression, Vols. I and II.
7. VOICE CULTURE AND ELOCUTION. *Second semester. W. or Th. 2:30. 1 h.*  
Emerson's Evolution of Expression, Vols. III and IV.  
A continuation of course 6.

## MATHEMATICS

## FIRST SEMESTER

1. COLLEGE ALGEBRA. Two sections. 8:00, 9:00. 5 h.
3. ANALYTIC GEOMETRY. 9:00. 5 h.
5. INTEGRAL CALCULUS. 10:00. 5 h.

7. MODERN GEOMETRY. 10:00. 3 h.
9. ELEMENTARY SOLID GEOMETRY. 11:30. 3 h.
11. MATHEMATICAL TEACHING. 11:30. 2 h.
13. SOLID ANALYTIC GEOMETRY. 8:00. 3 h. or 5 h.

## SECOND SEMESTER

2. COLLEGE TRIGONOMETRY. Two sections. 8:00, 9:00. 5 h.
4. DIFFERENTIAL CALCULUS. 9:00. 5 h.
6. DIFFERENTIAL EQUATIONS. 10:00. 3 h. or 5 h.
8. ADVANCED COLLEGE ALGEBRA. 10:00. 5 h.
10. SPHERICAL TRIGONOMETRY. 11:30. 2 h.
12. HISTORY OF MATHEMATICS. 11:30. 3 h.
14. a. THEORY AND PRACTICE OF ACCOUNTING. 11:30. 3 h.  
b. LIFE INSURANCE. 11:30. 2 h.

For courses for graduates only, see page 141.

Land Surveying 4 h., Topographical Surveying, 4 h., Drawing 3 h., and Dynamo Electrical Machinery 4 h., may be elected in the College of Engineering by students from the College of Liberal Arts.

Freshmen are eligible to courses 1, 3, 7, 9; 2, 8, 10, 14; but 3 presupposes 1 and 2, and 10 presupposes 1, 2, and 9.

## PHYSICS

- 1-2. GENERAL PHYSICS. *Both semesters.* Lecture 2 hours, recitations 2 hours. 4 h.

A general course extending throughout the year, covering the mechanics of solids, liquids, and gases, and the phenomena of heat, electricity, magnetism, sound, and light.

This course is intended not only to furnish an indispensable basis for the study of any branch of pure or applied science, but also as an elementary presentation of those facts and principles relating to the physical world which are to-day recognized as a part of the common knowledge of all educated persons. The lectures are fully illustrated by apparatus and experiments, thus enabling the student to observe personally most of those phenomena which have played an important role in the development of physical theories. The recitations are based upon the lectures and a text-

book which the student is expected to study systematically in parallel with the lectures.

Prerequisite: an elementary knowledge of plane trigonometry.

Text-book: Hastings and Beach's General Physics.

- 3-4. GENERAL LABORATORY PHYSICS. *Both semesters. One three-hour period per week. 1 h.*

Elementary laboratory work in the subjects of mechanics, heat, sound, light, electricity, and magnetism. This course is designed to give the student a more intimate knowledge of physical laws and to familiarize him with instruments of precision and methods of measurement.

It is strongly recommended that courses 3-4 be taken in parallel with 1-2.

Prerequisite: an elementary knowledge of plane trigonometry.

5. DESCRIPTIVE ASTRONOMY. *Second semester. 2 h.*

The course is conducted by means of lectures and recitations, and is designed to furnish that amount of information upon the subject of astronomy which may fairly be expected of persons who have what is called a "liberal education." Some time is given to the solution of certain problems in practical astronomy, each student obtaining the necessary data from his own observations and the Ephemeris.

Prerequisite: an elementary knowledge of trigonometry.

6. THEORETICAL MECHANICS. *First semester. 5 h.*

Lectures with recitations based upon the lectures and a text-book.

A study of the motion and conditions of equilibrium of particles and rigid bodies. Emphasis is laid upon the fundamental physical principles of the subject and upon the fact that the mathematical processes involved are simply an easy means of arriving at an understanding of a physical problem. An endeavor is also made to impart to the student a certain facility in translating physical conceptions into mathematical symbols and mathematical formulæ into concrete ideas.

Prerequisite: differential and integral calculus.

7. THEORY OF ELECTRICITY AND MAGNETISM. *First semester. 4 h.*

Lectures and recitations.

An elementary presentation of the mathematical theory of electricity and magnetism and the theory of electrical instruments.

Among the subjects treated are the following: a brief discussion of the theory of errors, with special application to measurements made in the electrical laboratory; the general principles of electrostatics, including Gauss' Theorem and its applications; condensers and dielectrics; magnetism and the properties of magnets; laws of the electric current; energy of the electric current; magnetic and electro-magnetic induction; magnetic effects of electric currents; thermoelectric currents; the general theory of several instruments of fundamental importance in electrical measurements; electric and magnetic units.

Prerequisites: courses 1 and 2, or their equivalent, and differential and integral calculus.

- 8-9. ELECTRICAL MEASUREMENTS. *Both semesters.* 3 to 6 h. to count as 1 to 3 h.

A laboratory course intended to accompany and to supplement course 7.

10. THEORY OF ELECTRICITY AND MAGNETISM. *Second semester.* 2 or 3 h.

The course begins by emphasizing and elaborating the most important topics of the preceding course. Many omitted topics are also taken up, after which, the course proceeds to the more advanced parts of the subject. Courses 7 and 10 are designed to furnish a thorough knowledge of fundamental facts and principles and a preparation for the further study of the most advanced electric and magnetic theory.

- 11-12. INTRODUCTION TO THEORETICAL PHYSICS. *Both semesters.* 3 h. Lectures, recitations, and parallel reading.

A course designed to give the student a wider knowledge of modern physical theories and to enable him to read with some ease the current literature and advanced treatises on theoretical physics. Among the subjects considered are the following: mechanics; vector analysis; kinetic theory of gases, thermodynamics; theory of light; theory of electricity and magnetism.

Prerequisites: differential and integral calculus.

- 13-14. ADVANCED EXPERIMENTAL PHYSICS. *Either or both semesters.*

Laboratory work on selected problems of considerable experimental difficulty, involving a somewhat advanced knowledge of theoretical physics.

Hours and credit to be arranged.

15. THE THEORY OF ELECTRONS. *Second semester.* 3 h.

A course of lectures and parallel reading dealing with the evidence which has led to the idea of the electron and to the atomic structure of electricity. The discharge of electricity through gases, radioactivity, the corpuscular theory of matter, and the bearing of the electron theory on the explanation of various other physical phenomena are also considered.

For courses for graduates only, see page 144.

## CHEMISTRY

1. GENERAL INORGANIC CHEMISTRY. *Both semesters.* 11:30. 3 h.  
Lectures.
2. GENERAL INORGANIC CHEMISTRY. *Both semesters.* 8:00 or 1:30.  
2 h.  
Laboratory.
3. QUALITATIVE ANALYSIS. *First semester.* 8:00 or 1:30. 2 h.  
Laboratory.  
Tests for bases and acids.
4. QUALITATIVE ANALYSIS. *Second semester.* 8:00 or 1:30. 2 h.  
Laboratory.  
Analysis of unknown substances.
5. QUANTITATIVE ANALYSIS. *Either semester.* 8:00 or 1:30. 5 h.  
Two recitations and three laboratory periods.  
Gravimetric.
6. QUANTITATIVE ANALYSIS. *Either semester.* 8:00 or 1:30. 5 h.  
Two recitations and three laboratory periods.  
Volumetric.
7. ANALYSIS OF IRON AND STEEL. *Second semester.* 8:00 or 1:30. 2 h.  
Courses 5 and 6 prerequisite.
8. SANITARY WATER ANALYSIS. *Second semester.* 8:00 or 1:30. 2 h.  
Courses 5 and 6 prerequisite.
9. MINERAL WATER ANALYSIS. *Either semester.* 8:00 or 1:30. 2 h.  
Courses 5 and 6 prerequisite.
10. ORE ANALYSIS. *Either semester.* 8:00 or 1:30. 5 h.  
Technical methods of analysis of common ores.  
Courses 5 and 6 prerequisite.



11. GAS ANALYSIS. *Either semester.* 8:00 or 1:30. 2 h.
12. ORGANIC CHEMISTRY. *First semester.* 2:30. 4 h.  
Lectures.
13. ORGANIC CHEMISTRY. Time to be arranged. 2 h. *For medical students.*  
Laboratory.
14. LABORATORY PRACTICE IN ORGANIC PREPARATIONS. *Second semester.*  
1:30. 3 or 5 h.  
Course 12 prerequisite.
15. ELEMENTARY ANALYSIS OF ORGANIC COMPOUNDS. *First semester.*  
1:30. 2 h.  
Courses 5, 6 and 14 prerequisite.
16. FOOD ANALYSIS. *Either semester.* 1:30. 3 or 5-h.  
Courses 5 and 6 prerequisite.
17. PHYSICAL CHEMISTRY. *First semester.* 10:00. 3 h.  
Lectures.
18. PHYSICAL CHEMISTRY. *First semester.* 2 h.  
Laboratory.
19. ELECTRO-CHEMISTRY. *Second semester.* 10:00. 2 h.  
Lectures.
20. ELECTRO-CHEMICAL ANALYSIS. *First semester.* 8:00 or 1:30. 2 h.
21. PHYSIOLOGICAL CHEMISTRY. *Second semester.* Time to be arranged.  
3 h.
22. ELECTRO-CHEMISTRY. *Second semester.* Time to be arranged. 2 h.  
or 4 h.  
Laboratory.  
Prerequisite: course 19, or may be taken with course 19.

No laboratory period of less than three consecutive hours will be accepted.

For courses for graduates only, see page 145.

## BIOLOGY

### I. BOTANY.

1. GENERAL BOTANY. *First semester.* Tu. Th. 9:00, lectures; M. W. F. 8:00 to 9:50, lab. sec. 1; 10:00 to 10:50 and 11:30 to 12:20, lab. sec. 2. 5 h.  
Lectures, recitations, field and laboratory work.  
The seed plants and ferns; structure and mode of life.  
Prerequisite: elementary chemistry.

2. GENERAL BOTANY. *Second semester.* 9:00. 5 h.  
A survey of the plant kingdom from alga to seed plant.
- 3-4. BOTANY OF COLORADO. *Both semesters.* M. W. F. 8:00 to 10:00. 3 h. *Open to those who have had courses 1 and 2.*  
The more important and conspicuous plants of the Rocky Mountain region; general principles of classification; evolution and geographical distribution.
5. FOREST BOTANY. *First semester.* M. W. F. 9:00. 3 h. *Open to all.* Two recitations and one two-hour laboratory period.  
A study of forests; structure, characteristics and development. The value of forests and forest products.
6. ECONOMIC BOTANY. *Second semester.* M. W. F. 9:00. 3 h. *Open to all.*  
A study of plant products used as food and medicine; vegetable raw materials of commerce.
7. BIOLOGICAL TEACHING. *Second semester.* W. 3:30. 1 h.  
Discussion of the principles of high-school courses in Botany and Zoology; preparation of laboratory directions; marking note books and papers; collection of laboratory material.
- 8-9. BIOLOGICAL SEMINAR. *Both semesters.* M. 3:30.  
Critical reading of some recent work of exceptional merit in botany or zoology; individual reports.
10. BACTERIOLOGY.  
This course is given in the Medical School.
11. TECHNICAL MICROSCOPY. *Both semesters.* *For advanced undergraduates.*

For courses for graduates only, see page 145.

## II. ZOOLOGY.

- 1-2. GENERAL ZOOLOGY. *Both semesters.* M. W. F. 1:30, lectures; Tu. Th. 8:00 to 10:00, lab. sec. 1; 10:00 to 10:50 and 11:30 to 12:20, lab. sec. 2. 5 h. *Open to all.*  
The different forms of animal life from the lowest to the highest.
3. PHYSIOLOGY. *Second semester.* 8:00. 3 h. *Open to those who have had elementary chemistry.*  
Recitations, demonstrations and some lectures.

The human body in health and disease. Recommended to students who intend to become teachers in the public schools.

- 4-5. VERTEBRATE HISTOLOGY AND EMBRYOLOGY. *Both semesters. M. T. W. Th. 1:30 to 3:30. 4 h.*

6. NATURE STUDY. *First semester. W. 3:30. 1 h. Open to all.*  
Lectures, recitations, field work, museum study.

- 7-8. COMPARATIVE ANATOMY. *Both semesters. 2 h. For advanced undergraduates and graduates.*

These courses are offered by Professor Theodore D. A. Cockerell.

- 9-10. LECTURES ON EVOLUTION. *Both semesters. F. 1:30. 1 h.*

These courses are offered by Professor Theodore D. A. Cockerell.

11. HUMAN ANATOMY. *Open to students who are also matriculated in the Medical School.*

For courses for graduates only, see page 146.

### III. SANITARY SCIENCE AND PUBLIC HEALTH.

1. ELEMENTARY SANITARY SCIENCE. *First semester. 2:30. 2 h. Open to all; recommended to freshmen.*

Lectures, recitations and readings.

A general discussion of health and disease; immunity; the cause and prevention of typhoid fever and other water-borne diseases; climate and health; vital statistics and their meaning; public health administration.

2. ADVANCED SANITARY SCIENCE. *Second semester. 2:30. 2 h.*

The cause and prevention of tuberculosis, diphtheria and pneumonia; school hygiene; domestic hygiene; personal hygiene.

3. SEMINAR IN SANITARY SCIENCE. *First semester. M. 4:30. 1 h.*

Individual reports; study of special topics. Graduate students who have had courses 1 and 2 make a minor in this course by extra work and the preparation of a thesis.

### GEOLOGY AND MINERALOGY

#### A. Courses for Undergraduates.

- 1-2. GENERAL GEOLOGY. *Both semesters. Lectures M. W. and F. 1:30; field or laboratory work, Tu. and Th. 1:30-4:30. 5 h. each semester.*

The course will consist of a study of the principles of geology, with special reference to the geological history of North America. Field study will be an important feature of the course.

- 3-4. GEOGRAPHIC GEOLOGY. *Both semesters. Lectures M. W. 9:00; field or laboratory, F. 9:00-11:00. 3 h. each semester. Open to all who have not had course 1-2 or its equivalent.*

This course will be adapted to the needs of those who expect to teach physical geography or geology in the high schools. It will include a study of the atmosphere, the waters of the earth and their work as geological agents, the rocks, the agencies of geological and geographical change, and the development and history of the physical features of the earth. Large use will be made of the local field for illustrative purposes. This course may be taken with course 5-6 to complete ten hours' science.

*B. Courses Open to Graduates and Undergraduates.*

- 5-6. ELEMENTARY STUDY OF MINERALS AND ROCKS. *Both semesters. T. Th. 9:00-11:00. 2 h. each semester. Open to all who have not had college geology or mineralogy.*

This course may be taken with courses 3-4 to complete ten hours' science.

- 7-8. ECONOMIC GEOLOGY. *Both semesters. M. Tu. W. Th. F. 11:30, with two hours additional laboratory work per week, arranged to suit convenience of students. 5 h. each semester. Engineering students meet with the regular class M. W. F. Credit 3 h.*

A study of the mineral resources of the United States, including:

a. The non-metallic products; fuels—coal, petroleum, gas; building and structural materials—stone, marble, slate, clay, cement, etc.; miscellaneous products—phosphates, mineral paints, mineral waters, salt, borax, etc.

b. The metal-bearing minerals; the origin and formation of ore-bodies; the ores of iron, copper, lead, zinc, gold, silver, etc.; the extraction and use of the metals.

c. Soils—their nature and origin.

- 9-10. MINERALOGY, DESCRIPTIVE AND DETERMINATIVE. *Both semesters. Lectures and recitations Tu. Th. 8:00; laboratory, M. W. F. 8:00 to 10:00. 3 hours' laboratory work to be arranged. 5 h. each semester.*

The course will include elementary crystallography, the determination of unknown minerals by physical and chemical tests, and the descriptive study of collections of typical minerals.

Prerequisite: inorganic chemistry, including simple qualitative analysis.

11. QUANTITATIVE MINERALOGY. *Second semester. Laboratory M. W. 1:30-4:30; recitations F. 1:30. 3 h.*

The course will include the quantitative determination of various economic minerals, with special reference to gold and silver.

Prerequisites: gravimetric quantitative analysis, and mineralogy course 9-10, but may be taken with course 10.

12. GEOLOGY OF COLORADO. *First semester. Daily. 10:00. 5 h.*

A study of the dynamic, historical and economic geology of the State. May be continued as a three-hour course in second semester.

Should be preceded by a course in general geology.

13. GEOLOGICAL MATERIALS FOR INDUSTRIAL CHEMISTRY. *Second semester. M. W. F. 10:00. 3 h.*

A study of the occurrence, properties and uses of geological products of economic value in chemical industries.

Prerequisite: a year in general chemistry.

- 14-15. ADVANCED FIELD GEOLOGY. *Both semesters. First semester. M. W. F. 1:30 to 4:30. Second semester to be arranged. 3 h. each semester.*

The course is designed to train the student in all kinds of geological field work. The methods used are those employed by the U. S. Geological Survey.

Prerequisite: superior work in courses 1 and 2. Registration only after consultation with the Department of Geology.

- 16-17. PALEONTOLOGY. *Both semesters. 3 h. each semester. The course is open to advanced students in geology and biology, on consultation with the professor.*

It will include lectures on the principles of paleontology, and the facts concerning the development of types which characterize the several periods of geologic time; laboratory work in the identification, classification and description of fossil animals and plants, and the discussion of their stratigraphic and biologic position and significance.

For courses for graduates only, see page 146.



## \*PHILOSOPHY

1. HISTORY OF PHILOSOPHY FROM THE BEGINNING TO PLATONISM. *First semester. Tu. Th. 12:00. 2 h. September, 1910.*
2. HISTORY OF PHILOSOPHY FROM PLATO TO FRANCIS BACON. *Second semester. Tu. Th. 12:00. 2 h. February, 1912.*
3. HISTORY OF PHILOSOPHY FROM BACON TO KANT. *First semester. Tu. Th. 12:00. 2 h. September, 1910.*
4. HISTORY OF PHILOSOPHY FROM KANT TO WUNDT. *Second semester. 12:00. 2 h. February, 1911.*
5. INTRODUCTION TO PHILOSOPHY. *First semester. M. W. F. 12:00. 3 h.*  
The general and special disciplines defined and their problems stated. September, 1910.
6. INTRODUCTION TO PHILOSOPHY. *Second semester. M. W. F. 12:00. 3 h.*  
Views of the important schools. February, 1911.
7. ETHICS. *First semester. Tu. Th. 11:00. 2 h.*  
(a) *Ethics as a descriptive science*, dealing with the psychology of will and desire, the outlines of Pagan, Christian and recent systems; the genetic and morphological aspects of moral beliefs and customs; and allied topics. (b) *Ethics as a normative science*, dealing with the concepts of the highest good, right and wrong, conscience, virtue, end and motive, and kindred subjects. (c) *Practical Ethics*:—application of foregoing sciences to solution of problems of conduct, such as culture, vocation, optimism, benevolence, veracity, honor, self-control, wisdom, justice and manners. September, 1910.
8. LOGIC. *Second semester. Th. 1 h. Hour to be arranged. February, 1911.*
9. ESTHETICS. *Second semester. Tu. Th. 11:00. 2 h. February, 1911.*

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\* Beginners are recommended to take the History of Philosophy and the Introduction to Philosophy together. At least four hours in these subjects must be taken before the student proceeds to courses 7, 9 or 10. Only A students are advised to take seminar in Metaphysics. Specialists must not register in Philosophy without written permission. Freshmen are advised to begin Philosophy, if at all, with the History of Philosophy only.

10. SEMINAR IN METAPHYSICS. *First semester.* 2 h. Time to be arranged.

Presupposes successful work in first six courses. September, 1910.

11. HISTORY OF EARLY EDUCATION AND CIVILIZATION. *First semester.* M. W. F. 11:00. 3 h. September, 1910.

12. HISTORY OF MODERN EDUCATION. *Second semester.* M. W. F. 11:00. 3 h. February, 1911.

13. COURSE IN HISTORY OF ETHICS. Time to be arranged. September, 1910.

14. COURSE IN HISTORY OF ÆSTHETICS. Time to be arranged. September, 1910.

## PSYCHOLOGY

1. GENERAL PSYCHOLOGY. (EDUCATION 1). *First semester.* M. W. F. Section I, 1:30; Section II, 2:30. 3 h.

This course gives, by means of lectures, recitations, experiments and demonstrations, a general survey of the essential facts and fundamental laws of mind. It is prerequisite to all other courses in psychology and to the courses in education. Those students who expect to make psychology or education a major should take this course in their sophomore year.

2. GENETIC PSYCHOLOGY. (EDUCATION 2). *Second semester.* M. W. F. 1:30. 3 h.

A systematic study of mental development in the race and in the individual. The course will sketch the evolution of mind in the animal world and trace the growth of mental functions in the individual, in childhood and adolescence, with special reference to educational problems and theory. It is recommended that those students who are primarily interested in education take this course as a continuation of course 1.

Prerequisite; Psychology 1, or its equivalent.

3. ADVANCED PSYCHOLOGY. *Second semester.* M. W. F. 2:30. 3 h.  
Lectures, discussions and readings.

Continuation of course 1, with an intensive study of selected problems; introspective exercises and an analytic study of mental phenomena.

Prerequisite: Psychology 1, or its equivalent.

- 4-5. EXPERIMENTAL PSYCHOLOGY. *Throughout the year. Tu. Th.* Two laboratory periods 1:30-3:30, and one lecture period, 3:30. 3 h.

This course gives an introduction to experimental psychology and aims to familiarize the student with modern psychological methods, apparatus and results.

*First semester.* Typical experiments and demonstrations in the psychology of the senses, feeling and movement, with a study of individual differences.

*Second semester.* Experiments in perception and the higher mental processes; time, intensity and extensity of mental phenomena; mental and physical tests and measurements; statistical methods.

6. SOCIAL PSYCHOLOGY. (EDUCATION 11). *First semester.* 2 h.

A discussion of the laws and hypotheses of mind within the social group; the contagion of ideas, emotions, and conduct; the individual as a social product; human occupations; educational implications.

Prerequisites: Psychology 1 and 2, or their equivalents.

7. CHILD STUDY. (EDUCATION 13). *First semester.* 2 h.

A systematic study of the physical and mental development of children; a discussion of the facts, scientifically determined in the psychology of childhood and adolescence, with their educational applications.

Prerequisite: Psychology 2, or its equivalent.

8. COMPARATIVE PSYCHOLOGY. *Second semester.* 2 h.

A definition of the problem of animal consciousness, a statement of the methods of investigation, and a detailed study of results.

Prerequisites: Psychology 1 and 2, or their equivalents.

9. ANTHROPOLOGY. *First semester. M. W. F.* 2:30. 3 h.

An introductory study of the essential characteristics of man. A survey of the physical evolution and characters of mankind is followed by an investigation of the origin and development of the important elements of human culture, material, mental and social.

10. ETHNOLOGY. *Second semester. M. W. F.* 3:30. 3 h.

A comparative study of the races and peoples of the earth in their respective geographical habitats, their origin, distribution, physical characteristics and cultural activities, with an outline of the elements of prehistoric archaeology and its bearing on the study of human origins.

11. SEMINAR IN PSYCHOLOGY. *Throughout the year. Tu. Th. 2:00. 2 h. For graduates and advanced undergraduates.*

This course will vary from year to year, being adjusted to the interests and needs of members. Systematic study of special questions in psychological theory, with discussion of new solutions; advanced work and independent investigations and research in special problems.

For courses for graduates only, see page 147.

## EDUCATION

1. GENERAL PSYCHOLOGY. (PSYCHOLOGY 1). *First semester. M. W. F. Section I, 1:30; Section II, 2:30. 3 h.*

This course gives, by means of lectures, recitations, experiments and demonstrations, a general survey of the essential facts and fundamental laws of mind. It is prerequisite to all other courses in psychology and to the courses in education. Those students who expect to make psychology or education a major should take this course in their sophomore year.

2. GENETIC PSYCHOLOGY. (PSYCHOLOGY 2). *Second semester. M. W. F. 1:30. 3 h.*

A systematic study of mental development in the race and in the individual. The course will sketch the evolution of mind in the animal world and trace the growth of mental functions in the individual in childhood and adolescence, with special reference to educational problems and theory.

It is recommended that those who are primarily interested in education take this course as a continuation of course 1.

Prerequisite: Education 1, or its equivalent.

3. SCIENCE AND PRINCIPLES OF EDUCATION. *First semester. 3 h.*

An examination of those facts and hypothesis which have significance for educational theory. Biological, physiological, anthropological, psychological, sociological, and philosophical data will be considered to the end of deciding upon a working hypothesis for educational practice.

Prerequisite: Education 1, or its equivalent.

4. METHOD IN EDUCATION. *First semester. 2 h.*

The application of theories in the realm of practice; the means of education—the art; close examination of general and special

methods; relative values of methods; improvement in methods; the mechanics of instruction.

Prerequisite: Education 1, or its equivalent.

5. ELEMENTARY SCHOOLS. *Second semester. 3 h.*

The history of these institutions; curricula; aims and organization; practices; merits; failures; means of improvement; opportunities; special attention to Colorado elementary school system and Colorado school law.

Prerequisite: Education 3, or its equivalent.

6. SECONDARY SCHOOLS. *Second semester. 3 h.*

The history of the secondary school; curricula; aims and organization; practices; merits; failures; opportunities; the adolescent; comparative study of secondary schools; the Colorado system and Colorado school law in this connection.

Prerequisite: Education 3, or its equivalent.

7-8. PRACTICE TEACHING AND CLASS-ROOM MANAGEMENT. *Either or both semesters. 4 h.*

Practice teaching is done in the public schools of Boulder, both elementary and secondary. The student teaches each day. The scheme is to separate from the regular classes a few who need instruction in a small group and under close supervision. The student attends each week a class in which the particular problems of class-room management are discussed.

9. HISTORY OF ANCIENT AND MEDIEVAL EDUCATION. *First semester.*

*M. W. F. 11:00. 3 h. Open to all except freshmen.*

This course deals with the history of culture and civilization, of social and intellectual as well as of definite school influences in China, India, Persia, and other Asiatic countries, as well as in Greece and Rome. It also deals with primitive Christian and Mediæval education.

10. HISTORY OF MODERN EDUCATION. *Second semester. M. W. F. 11:00. 3 h. Open to all except freshmen.*

In this course it is necessary to confine the work more strictly to academic education. The course deals with all the great reform movements from the Revival of Learning to the present day.

11. SOCIAL PSYCHOLOGY. (PSYCHOLOGY 6). *First semester. 2 h.*

A discussion of the laws (and hypothesis) of mind within the social group; the contagion of ideas, emotions, and conduct; the in-



dividual as a social product; human occupations; educational implications.

Prerequisites: Education 1 and 2, or their equivalents.

12. CONTEMPORARY EDUCATIONAL PROBLEMS. *Second semester. 2 h.*

An intensive study of topics only lightly touched upon in other courses or which present such difficulties as to require closer study: Means of securing teachers; moral education; education for American citizenship; education for defective classes; the education of immigrants; technical education. When possible, experts along the various lines will be called in to lecture.

Prerequisites: Education 1, 2, 3 and 11 or 13.

13. CHILD STUDY. (PSYCHOLOGY 7). *First semester. 2 h.*

A systematic study of the physical and mental development of children; a discussion of the facts, scientifically determined, in the psychology of childhood and adolescence, with their educational applications.

Prerequisite: Education 2, or its equivalent.

14. COMPARATIVE STUDY OF SCHOOL SYSTEMS. *Second semester. 2 h.*

A detailed comparative study of the school systems of Germany, France, England, and the United States as to ideals, organization, administration, methods, and efficiency.

Prerequisites: Education 9 and 10.

15. ADVANCED PRACTICE TEACHING. *Either or both semesters. 2-4 h.*

A study by observation and experiment of particular and advanced problems of instruction and supervision. It must be taken in connection with the Practicum in Education.

Prerequisite: Education 7 or 8, and special permission.

16. PRACTICUM IN EDUCATION. *Throughout the year. 2 h.*

The subject-matter of this course will vary from year to year. It will take up for special examination and investigation selected problems of importance in educational theory and practice. Independent investigation and research in special problems.

17. JOURNAL CLUB.

An organization of those students, especially of the departments of education and psychology, interested in current educational literature and events and contemporary educators, articles, books, educational news, and experiments.

## HISTORY

1. GENERAL EUROPE. 376-1815. *Throughout the year. M. W. F. 2:30. 3 h.*

Lectures, text-book and collateral readings.

A survey of the history of the western European nations from the invasions of the Germans to the Congress of Vienna. The first semester will end at the year 1300.

2. EUROPE IN THE NINETEENTH CENTURY. *Throughout the year. M. W. F. 10:00. 3 h.*

Lectures and collateral readings.

Intended to supplement course 1 by a more detailed study of nineteenth century history. After a brief outline of the institutions and ideals of the Revolutionary and Napoleonic period, the course will deal with the development of the principal nations of modern Europe.

Course 1 a prerequisite.

3. AMERICAN HISTORY. 1760-1870. *Throughout the year. M. W. F. 3 h. Not open to freshmen.*

Lectures, text-book, and collateral readings.

The political history of the United States from the period of the Revolution through the Civil War; the introductory course in United States History.

4. THE COLONIAL EXPANSION OF ENGLAND. *Throughout the year. Tu. Th. 10:00. 2 h.*

A study of England's colonial policy and expansion from the sixteenth century to the present day. The major part of the course will be devoted to the problems and government of the colonies in the nineteenth century.

Course I a prerequisite.

5. ENGLISH CONSTITUTIONAL HISTORY. *Throughout the year. M. W. F. 11:30. 3 h.*

For this course given in the Law School credit will be given to students of the College of Liberal Arts.

Course 1 a prerequisite.

6. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES. *Throughout the year. Tu. Th. 11:30. 2 h.*

A history of the settlement of the Continent. The life of the people, and the development of natural resources. Particular

attention will be paid to the evolution of the means of transportation, the rise of industries, improvements in agriculture, reclamation of the West, and like topics. Not given in 1910-1911.

Course 3 a prerequisite.

7. AMERICAN COLONIAL HISTORY. *First semester. Tu. Th. 11:30. 2 h.*

A brief outline narrative of the establishment of the thirteen colonies, and their political and social development to the period of the Revolution. Emphasis will be laid on the European inheritance of the colonists, and their development of American institutions in the new environment.

Course 3 a prerequisite.

8. CIVIL WAR AND RECONSTRUCTION. *Second semester. Tu. Th. 11:30. 2 h.*

A study of the political and economic causes of the war, the events of the struggle, and of the subsequent reconstruction, both political and constitutional, consequent upon its outcome.

Course 3 a prerequisite.

9. THE MEDIAEVAL CHURCH AND THE REFORMATION. *Throughout the year. M. W. F. 11:30. 3 h.*

Lectures and reports.

A study of the life and the institutions of the Church from its origin through the period of the Reformation. The early organization of the Church and the persecutions, the rise of the Papacy and the greater monastic orders, the mediæval heresies and attempts at internal reform, and the culmination of the later mediæval struggles in the rise of the new churches of the sixteenth and seventeenth centuries.

Two years of history, a prerequisite.

10. ENGLISH SOCIAL AND INDUSTRIAL HISTORY *Throughout the year. 2 h.*

Not given in 1910-1911.

For courses for graduates only, see page 148.

### ECONOMICS AND SOCIOLOGY

1. DEVELOPMENT OF INDUSTRIAL SOCIETY. *First semester. M. W. F. 2:30. 3 h.*

The aim of this course is to give an outline of English industrial development from the twelfth century to the present, in order

to show the genesis of modern industrial customs and rights. The course is designed to be introductory to all courses in economics.

2. ECONOMIC HISTORY OF THE UNITED STATES. *Second semester. M. W. F. 2:30. 3 h.*

Lectures, reading, discussions.

3. GENERAL PRINCIPLES OF ECONOMICS. *First semester. M. W. F. 10:00. 3 h.*

Lectures, reading, discussions.

This course, or its equivalent, is prerequisite to all other courses in Economics, except course 1.

4. PRINCIPLES OF ECONOMICS. *First semester. M. W. 9:00. 2 h.*  
Designed primarily for engineering students.

*For Graduates and Undergraduates.*

5. PRINCIPLES OF SOCIOLOGY. *First semester. M. W. F. 2:30. 3 h.*  
Lectures, reading, discussions.

This course aims to present a brief outline of sociological thought; a discussion of the elements of association underlying social relations and institutions; the results of race, group and individual competition; the conditions of progress; some of the chief problems of Sociology—population, degeneration, pauperism, the dependent classes, crime, immigration, divorce, great cities, education.

Students are strongly advised not to elect this course until the senior year.

6. SPECIAL PROBLEMS IN SOCIOLOGY. *Second semester. M. W. F. 2:30. 3 h.*

Reading, reports, discussions, with occasional lectures.

Must be preceded by Principles of Sociology.

7. THE THEORY AND APPLICATION OF STATISTICS. *First semester. 2 h.*

This course aims to present the subject of statistics as an instrument of research. It is designed for all students of social and economic problems.

8. NATIONAL ADMINISTRATION. *First semester. Tu. Th. 2 h.*

A study of the United States government in action.

9. STATE AND LOCAL GOVERNMENT. *Second semester. Tu. Th. 8:00. 2 h.*

Comparative studies of the governmental institutions of the various states.

10. POLITICS. *Second semester. M. W. F. 11:30. 3 h.*

Comparative studies of the governments of the United States and leading European countries; political machinery.

11. POLITICAL PARTIES AND PARTY PROBLEMS. *First semester. M. W. F. 2:30. 3 h.*

This course deals with the organization of political parties, with party machinery, and with such current party problems as direct primaries, proportional representation, the initiative, referendum, recall, civil service, corrupt practices acts, and methods of financing political parties.

12. CITY GOVERNMENT IN THE UNITED STATES. *Second semester. M. W. 1:30. 2 h.*

13. CITY GOVERNMENT IN COLORADO. *Second semester. F. 1:30. 1 h.*

14. CONSULAR AND DIPLOMATIC SERVICE. *Second semester. Tu. Th. 2:30. 2 h.*

Designed primarily for those who desire to enter the foreign service of the United States.

15. HISTORY OF COMMERCE. *First semester. Tu. Th. 2 h.*

A study of the development of the world's commerce with special attention to modern commercial organization.

16. ECONOMIC AND COMMERCIAL GEOGRAPHY. *First semester. Tu. Th. 8:00. 2 h.*

Studies in the world's production and distribution.

17. CURRENT ECONOMIC PROBLEMS. *Second semester. Tu. Th. 10:00. 2 h.*

Lectures, reading, discussions.

This course deals with the chief elements in such topics as the currency, money and banking, free trade and protection, the railway problem, taxation, the relation of the state to industrial action, trusts, and, in general, such topics as may be of timely interest to students of economic science.

18. MONEY AND BANKING. *Second semester. M. W. F. 8:00. 3 h.*

Lectures, reading, reports.

19. TRANSPORTATION. *Second semester. M. W. F. 3 h.*

Studies in railroad management, finance, rates, and government ownership.

Must be preceded by Principles of Economics.



20. CORPORATION FINANCE. *Second semester.* 2 h.

A study of the methods of organizing and financing large industrial companies.

21. TAXATION. *First and second semester.* 2 h.

A study of the revenue systems in the United States and foreign countries.

22. THEORY OF INVESTMENTS (LIFE INSURANCE, ETC.) *First semester.*  
2 h.

Given in Department of Mathematics.

23. THEORY AND PRACTICE OF ACCOUNTING. 3 h.

Given in Department of Mathematics.

For courses for graduates only, see page 149.

## MUSIC

1. HARMONY. *First year. Each semester. M. W. F. 11:30.* 3 h.  
Text-book: Jadassohn.

2. HARMONY. *Second year. Each semester. Tu. Th. 11:30.* 2 h.  
Text-book: Jadassohn with additional work from other text-books.

3. COUNTERPOINT. *Each semester. Tu. Th. 10:00.* 2 h. *Open only to students who have completed course 2.*

4. CANON AND FUGUE. *Each semester.* 1 h. *Open only to students who have completed courses 2 and 3.*

5. COMPOSITION AND ORCHESTRATION. *Each semester.* 1 h. *Open only to students who have completed course 2.*

Students in this course are advised to take in connection with it course 3 unless this work has already been done.

6. HISTORY OF MUSIC. *Each semester. Tu. 3:30.* 1 h. *Open to all.*

Lecture course, including lectures on Musical Æsthetics and Musical Analysis.

7. LECTURES ON MUSIC.

In addition to the above regular course, occasional lectures on the Opera, the Modern Music-Drama, and other musical subjects are given by the Professor of Music.

8. *ÆSTHETICS AND PHILOSOPHY OF MUSIC. Either semester. 1 h.*  
NOTE—For musical organizations, see page 46.

ELECTIVES IN THE PROFESSIONAL SCHOOLS

In accordance with the general plan outlined on page 71, the courses tabulated below may be elected in the professional schools.

COLLEGE OF ENGINEERING.

The following subjects in the College of Engineering may be taken by all students in the College of Liberal Arts. Numerous other eligible courses are common to both schools.

|                                |         |
|--------------------------------|---------|
| Land Surveying .....           | 4 hours |
| Topographic Surveying .....    | 4 hours |
| Descriptive Geometry.....      | 3 hours |
| Dynamo-Electric Machinery..... | 4 hours |

SCHOOL OF LAW.

Students in the College of Liberal Arts in their fourth year who declare their intention of proceeding to the degree LL.B. in the University of Colorado, may be allowed credit for twenty-two hours on the completion of all work required in the freshman year of the School of Law.

SCHOOL OF MEDICINE.

The following courses given in the School of Medicine will be accepted for the B.A. degree from students who declare their intention of proceeding to the degree of M.D.:

| <i>Freshman Year.</i> |          | <i>Sophomore Year.</i> |          |
|-----------------------|----------|------------------------|----------|
| Anatomy .....         | 8 hours  | Anatomy .....          | 8 hours  |
| Chemistry .....       | 10 hours | Physiology .....       | 10 hours |
| Histology .....       | 8 hours  | Embryology .....       | 3 hours  |
| Bacteriology .....    | 4 hours  | Pathology .....        | 9 hours  |

Those who elect subjects in Law or Medicine must pay the year's fee in the professional school.



# COLLEGE OF COMMERCE

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## FACULTY

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JOHN B. PHILLIPS, Ph.D.,  
Secretary of the College of Commerce.

The faculty of the College of Commerce consists of professors and instructors whose work contributes to the courses.

## ANNOUNCEMENT

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The College of Commerce was opened September, 1906. Its purpose is to provide professional training for the practical demands of business. It aims to prepare men for careers in Domestic and Foreign Commerce and Banking, Insurance, Transportation, Trade and Industry, Journalism, and in branches of the Public Service, like the Consular, in which a knowledge of business is essential. Heretofore universities and colleges have done all they could for the young man who wished to become a minister, teacher, lawyer, physician, journalist, or engineer. The College of Commerce is developed in response to the demands of (1) enlarged commercial operations, (2) the public service, (3) the desire of parents to give their sons a college education and at the same time prepare them for their life work in business.

It is well known that the knowledge of the details of any particular line of business can be acquired only by actual experience. But the broad training given students in this department of the University will enable them to acquire the routine technicalities of any concern more easily than those whose minds have not been made flexible and acute by systematic training. They will thus the more readily assume positions of leadership and responsibility in the business world.

The curriculum of the College of Commerce is prepared with the following aims in view: (1) To furnish a certain amount of culture work which is the mark of college training. (2) To familiarize the student with the nature and workings of the industrial organism. This is attempted by studies in commercial geography, economics and history of commerce, transportation, banking, business organization and management. (3) To impart a certain amount of knowledge of the physical and chemical sciences and their applications to the industrial arts. (4) To give an acquaintance with the articles of commerce and the various industrial processes through which they pass. (5) To make the student acquainted with the principles of commercial law. (6) To supply an equipment in modern languages. (7) To afford an opportunity to acquire some knowledge of a particular line of trade.



The work of the College of Commerce is on the same high plane as that of the other undergraduate departments of the University. The entrance requirements are the same and an equal number of hours' work is required for the Bachelor's degree.

### ORGANIZATION

The College of Commerce offers four courses: 1. Banking. 2. Manufactures. 3. Journalism. 4. Trade, Transportation, and Consular Service.

### REQUIREMENTS FOR ADMISSION

The requirements for admission are the same as for the College of Liberal Arts. See page 53.

### \*SUBJECTS IN THE COLLEGE OF COMMERCE

(REQUIRED FOR GRADUATION.)

#### FRESHMAN YEAR

|                                       | I.<br>Banking | II.<br>Mfrs. | III.<br>Jour. | IV.<br>Trade, Etc. |
|---------------------------------------|---------------|--------------|---------------|--------------------|
| 1. ENGLISH LANGUAGE.                  | 6             | 6            | 6             | 6                  |
| 2. SCIENCE .....                      | 10 (Chem.)    | 10           | 10 (Chem.)    | 10                 |
| 3. HISTORY .....                      | 6             | 6            | 6             | 6                  |
| 4. FRENCH, GERMAN OR<br>SPANISH ..... | 10            | 10 (French)  | 10            | 10                 |
|                                       | 32            | 32           | 32            | 32                 |

#### SOPHOMORE YEAR

|                                           |            |            |                         |                                       |
|-------------------------------------------|------------|------------|-------------------------|---------------------------------------|
| 5. ENGLISH LANGUAGE<br>OR HIST. ENG. LIT. | 4          | 4          | 4                       | 4                                     |
| 6. MATH., SCIENCE..... (Math.)            | 10 (Math.) | 10 (Chem.) | —                       | (Econ.<br>Geol.,<br>Econ.<br>Bot.) 10 |
| 7. HISTORY OR ECONOM-<br>ICS .....        | 6          | —          | (Hist.) 6<br>(Econ.) 10 | 6                                     |
| 8-9. FREE ELECTIVES...                    | 10         | 6          | 10                      | 10                                    |
|                                           | 30         | 30         | 30                      | 30                                    |

\* In addition to regular courses in the departments open to election, provision will be made for lectures on current problems and practical topics by prominent business men.

## JUNIOR AND SENIOR YEARS

|                                           |      |      |      |      |
|-------------------------------------------|------|------|------|------|
| LAW .....                                 | † 10 | † 10 | 10   | † 10 |
| ECONOMICS .....                           | 20   | 10   | —    | 20   |
| ECON. GEOL., ECON. BOT.,<br>PHYSICS ..... | —    | 10   | —    | —    |
| ENGLISH LANG. AND LIT.                    | —    | —    | † 20 | —    |
| CLASSICS (in Eng.)....                    | —    | —    | 10   | —    |
| FREE ELECTIVES.....                       | 28   | 28   | 18   | 28   |
|                                           | 58   | 58   | 58   | 58   |

The following courses are especially recommended for students in the College of Commerce.

History of Commerce.

Commercial Geography.

Economic History of the United States.

Taxation.

Transportation.

Corporation Finance.

Money and Banking.

Journalism.

Diplomatic and Consular Service.

Theory and Practice of Accounting.

Life Insurance.

For a further description of these courses, see Departments of Mathematics, and Economics and Sociology in College of Liberal Arts.

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† The brackets indicate the equivalent of the thirty hours of group electives required in the junior and senior years of the College of Liberal Arts. If subjects in the first two years, also characteristic of each of the four courses, are added, the sum is fifty hours for each group.

# COLLEGE OF EDUCATION

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## FACULTY

---

FRANK E. THOMPSON, B.A.,  
Secretary of the Faculty of the College of Education.

The Faculty of the College of Education consists of Professors and Instructors in the College of Liberal Arts whose work contributes to the various courses.

# GENERAL STATEMENT

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## ORGANIZATION

A College of Education, to be a division of the College of Liberal Arts, was authorized by the Board of Regents in January, 1908. The report of the committee on a course of study was adopted in April, and the College was regularly opened for work in September of that year.

## FUNCTION

It is intended that this College shall provide systematic and comprehensive training for those who may choose teaching as a *profession*. That there may be such a profession becomes every year more apparent, and it becomes apparent, too, that preparation for service in it must be as complete as for service in other professions. No human endeavor is more important than education; no class should be more carefully prepared than teachers. The need of the present time, expressed in most quarters in a demand, is that many of the teachers in the elementary schools, all of the teachers in the high schools, and all persons engaged in supervision of instruction shall have as a minimum of scholarship the B.A. degree, or its equivalent, and shall have made intensive study of the history, theory, and practice of education. There is need then, in each state for at least one professional school of collegiate rank which shall afford opportunity for training, both in theory and practice, for teaching, supervisory and administrative positions in elementary, secondary and normal schools.

The College of Education is designed to satisfy this need; it is a device of organization and administration to secure for the teacher studies along pertinent lines and in right proportions and sequence. The student looking toward teaching as a profession will be assisted and directed in the choice and prosecution of his work from the time of his matriculation until his graduation. He will not sacrifice anything of the culture of the Liberal Arts course, but through all the four years he will be growing toward efficiency and in professional spirit.

### DESIGN OF CURRICULUM

The curriculum is designed to furnish to the prospective teacher who would be a leader in educational thought and thoroughly equipped for his work:

1. Courses calculated to give a broad acquaintance with knowledge and that culture rightly expected of the college graduate.
2. Courses in the subjects he expects to teach, of such character and so organized in sequence that when graduated he will be in some measure an authority in his branch.
3. Courses that will give knowledge of:
  - a. The constitution and needs of society.
  - b. Child and adult natures and their possibilities for modification.
  - c. The educational values of the various school subjects.
  - d. The arts of instruction—this knowledge to be both general and concrete and to come in large measure from actual practice in teaching.
  - e. Educational history and its significance, both for the present and the future.

### THE UNIVERSITY AND THE TRAINING OF TEACHERS

Inasmuch as teaching, in the professional sense, is service in an exceedingly complex field, the training required cannot be adequately given except in institutions of at least collegiate grade, nor in less time than that required for a college course. It is therefore peculiarly fitting that a College of Education should be organized in connection with, and largely out of the facilities of, the College of Liberal Arts in the University. Here are found the most complete equipment for securing the requisite scholarship, the best atmosphere for the development of scientific power and professional spirit, as well as the most highly selected students with whom to work.

College atmosphere gives a breadth of culture and has in it a suggestion of leadership which is to be found nowhere else. For the high-school teacher in particular a college training is demanded in practically all sections, as was shown by the Report of the Committee of Fifteen, as early as 1895, later by the Standards for Accrediting of the North Central and other Associations of Colleges and Secondary Schools, and recently in an emphatic way in the joint recommendations of the Committee of Seventeen on the Professional Preparation of High-School Teach-



ers. In addition to this minimum requirement for academic preparation the same associations are insisting upon both general and special pedagogical training of a standard given only in university departments.

From the standpoint of the University, the training of teachers is one of its most important means of service. Regarding the essential services of a university to the commonwealth as the scientific investigation of the people's problems, the training of certain persons for the professions, the bringing out of leaders and the setting of culture standards, it is at once apparent that there is no more logical channel, especially for state university endeavor, than the training of expert educators. Teaching is one of the community's most important activities, and a rapidly growing body, both lay and professional, is expecting the same effectiveness in results as is achieved in other fields. The university can make no mistake in training these leaders, and the student can make no mistake in taking such training.

### ADMISSION TO THE COLLEGE OF EDUCATION

1. **REGULAR STANDING.**—The requirements for admission to regular standing in the College of Education are the same as for the College of Liberal Arts. See page 53.

2. **ADVANCED STANDING.**—Students from universities, colleges, technical and teachers' training schools, who have been admitted to such institutions from a full four-year high-school course, will be admitted to such advanced standing as may be agreed upon by a committee composed of the Dean of the College of Liberal Arts, the Secretary of the College of Education, and the heads of departments in which advanced standing is desired.

3. **IRREGULAR STANDING.**—Persons who are 21 years or more of age and who give evidence of fitness to pursue particular studies may be admitted as special students without examination. Such special students may be graduated by fulfilling all requirements, both for admission and graduation.

### COURSES OF STUDY LEADING TO THE DEGREE BACHELOR OF ARTS AND A BACHELOR'S DIPLOMA IN EDUCATION

The course of study of the College of Education covers a period of four years, 120 hours of credit being required for graduation. Graduates receive the degree of Bachelor of Arts and a Bachelor's Diploma in

Education, which latter is a certificate of proficiency in the theory of education and a guarantee of ability to teach.

Attention is called to the following regulations:

1. All students must take fifty hours in some scheduled group; of these fifty hours they must take at least thirty in the Junior and Senior years.

2. A student may be allowed to substitute four hours of Literature for the required Composition of the Sophomore year, on recommendation of the head of the Department, if he attains a satisfactory grade in English Composition of the Freshman year.

3. Students taking ten hours of either classics, mathematics, or science in the Freshman year, shall choose five hours in one of the other groups named, in the Sophomore year.

4. The selection of the major subject should be made and signified to the Secretary of the College of Education not later than the beginning of the Sophomore year.

5. The general regulations of the College of Liberal Arts apply in the College of Education.

NOTE.—It will be observed that the course of study of the College of Education is distributed as follows:

|                             |    |
|-----------------------------|----|
| Prescribed Subjects .....   | 30 |
| Group Electives .....       | 50 |
| Professional Subjects ..... | 30 |
| Free Electives .....        | 10 |

If the Prescribed Subjects or the Professional Subjects are included in the Group Electives the Free Electives may be increased to as much as thirty hours.

## SCHEDULE

### FRESHMAN YEAR

|                                           |    |
|-------------------------------------------|----|
| 1. ENGLISH LANGUAGE .....                 | 6  |
| 2. CLASSICS, MATHEMATICS OR SCIENCE ..... | 10 |
| 3. HISTORY OR ECONOMICS .....             | 6  |
| 4. GROUP OR FREE ELECTIVES .....          | 8  |

## SOPHOMORE YEAR

|                                           |    |
|-------------------------------------------|----|
| 5. ENGLISH (OR LITERATURE) .....          | 4  |
| 6. CLASSICS, MATHEMATICS OR SCIENCE ..... | 5  |
| 7. a. PSYCHOLOGY .....                    | 6  |
| b. HISTORY OF EDUCATION .....             | 6  |
| 8-9. GROUP OR FREE ELECTIVES .....        | 9  |
|                                           | —  |
|                                           | 30 |

## JUNIOR YEAR

|                                                                                          |       |
|------------------------------------------------------------------------------------------|-------|
| SCIENCE AND PRINCIPLES OF EDUCATION, AND EITHER<br>ELEMENTARY OR SECONDARY SCHOOLS ..... | 6     |
| ELECTIVES (In Education Group) .....                                                     | 3-6   |
| 10. GROUP ELECTIVES (Subjects Student Intends to<br>Teach) .....                         | 20-15 |
| 11. FREE ELECTIVES .....                                                                 | 6-3   |
|                                                                                          | —     |
|                                                                                          | 30    |

## SENIOR YEAR

|                                                                  |       |
|------------------------------------------------------------------|-------|
| PRACTICE TEACHING AND METHOD .....                               | 6     |
| ELECTIVES (In Education Group) .....                             | 0-3   |
| 12. GROUP ELECTIVES (Subjects Student Intends to<br>Teach) ..... | 20-15 |
| 13. FREE ELECTIVES .....                                         | 9-6   |
|                                                                  | —     |
|                                                                  | 30    |

## SUGGESTED GROUPS OF MAJORS AND MINORS

The purpose of the group elective requirement is to secure on the part of the teacher a thorough and systematic knowledge of the subject or subjects he proposes to teach. Usually the teacher in the secondary school is required to teach two or more subjects. Hence it is desirable that he should have a careful and extensive preparation in one subject and sufficient preparation for teaching at least the elementary steps of two or three additional subjects. The following groups of majors and minors are uniform with those of the College of Liberal Arts:

## I. DIVISION OF LETTERS

|                                                                   |        |                                                              |
|-------------------------------------------------------------------|--------|--------------------------------------------------------------|
| GROUP (a) Major, Latin;                                           | Minors | { Greek,<br>European History,<br>History of<br>Philosophy.   |
| GROUP (b) Major, Greek;                                           | Minors | { Latin,<br>English Literature,<br>History of<br>Philosophy. |
| GROUP (c) Major, German;                                          | Minors | { French,<br>History.                                        |
| GROUP (d) Major, { Romance<br>Languages;                          | Minors | { Latin,<br>German.                                          |
| GROUP (e) Major, { Compara-<br>tive and<br>English<br>Literature; | Minors | { History,<br>English Language.                              |
| GROUP (f) Major, { English<br>Language;                           | Minors | { English Literature,<br>English History.                    |

## II. DIVISION OF SCIENCES

|                              |        |                                                      |
|------------------------------|--------|------------------------------------------------------|
| GROUP (g) Major, Mathematics | Minors | { Physics,<br>Astronomy.                             |
| GROUP (h) Major, Chemistry;  | Minors | { Physics,<br>Mathematics.                           |
| GROUP (i) Major, Physics;    | Minors | { Mathematics,<br>Chemistry.                         |
| GROUP (j) Major, Botany;     | Minors | { Zoology,<br>Chemistry,<br>Geology.                 |
| GROUP (k) Major, Zoology;    | Minors | { Botany,<br>Chemistry,<br>Geology.                  |
| GROUP (l) Major, Geology;    | Minors | { Mineralogy,<br>Chemistry,<br>Physics,<br>Zoology.  |
| GROUP (m) Major, Mineralogy; | Minors | { Geology,<br>Chemistry,<br>Physics,<br>Mathematics. |

## III. DIVISION OF PHILOSOPHY

|                                      |                                         |
|--------------------------------------|-----------------------------------------|
| GROUP (n) <i>Major</i> , Philosophy; | <i>Minors</i> { Psychology,<br>Biology. |
| GROUP (o) <i>Major</i> , Psychology; | <i>Minors</i> { Philosophy,<br>Biology. |
| GROUP (p) <i>Major</i> , Education;  | <i>Minors</i> { Psychology,<br>Biology. |

## IV. DIVISION OF HISTORY AND ECONOMICS

|                                                           |                                             |
|-----------------------------------------------------------|---------------------------------------------|
| GROUP (q) <i>Major</i> , History;                         | <i>Minors</i> { Economics and<br>Sociology. |
| GROUP (r) <i>Major</i> , { Economics<br>and<br>Sociology; | <i>Minor</i> History.                       |

## PRACTICE TEACHING

With the co-operation of the Board of Education of Boulder there has been worked out a very satisfactory scheme for the practice teaching. Certain classes in the elementary schools and in the high school are by the superintendents divided into sections, and one section of each such division is given into the charge of a student teacher who is under the immediate supervision of the regular class teacher, the school principal, and some one from the College of Education, and under the general supervision of the head of that institution. The section of the class taken by the student teacher is as a rule the smaller section and is composed of those who have had difficulty in getting on—of those who, except for this arrangement, would be likely to fail of passing. Each student in such a section is to some extent a subject for special study and treatment, hence the novice teacher's attention is at once forced where it properly should be: upon the problem of how children learn rather than upon how teachers teach.

Each such section is a problem, and a set of problems, to be solved by the persons mentioned working together. The student teacher observes the work of the regular class (in which his section frequently recites), sees what the ideal for the day's lesson is and when he meets his section, does what he can to attain that ideal. In this attempt he is helped by the supervisors and makes rapid progress toward efficiency.



## PRACTICE TEACHING FACILITIES

Practice teaching is done in the Boulder public schools, both elementary and secondary. The principal of the Boulder High School is Instructor in Secondary Practice Teaching, and the Principal of the University Hill School is Instructor in Elementary Practice Teaching. This arrangement in part insures the very cordial relations that obtain between the city school officials and the University. The practice teaching in both the high and elementary schools is done under most natural conditions. The high school is one of the largest and most efficient in the State, and the elementary schools are second to none. The apprentice teachers are getting their experience in real schools.

## GRADUATE WORK

Graduates of the College of Education, or of institutions of a similar character, may continue the study of education in the Graduate School of the University as candidates for the degree of Master of Arts, and for the Master's Diploma in Education. One year of resident study is required. The candidate for the higher degree and the diploma in education is expected to devote one-half of his time to academic subjects and one-half to professional study in advance of the requirements for the Bachelor's degree, a part of which must demonstrate through practice teaching superior efficiency in instruction. The Master's Diploma in Education is an honor certificate, given only to those, who, in addition to fulfilling, by resident work and a thesis, the requirements for the Master's Degree of the Graduate School of the University, give evidence of eminent educational ability and capacity for leadership.

## COMMITTEE ON THE RECOMMENDATION OF TEACHERS

The College of Education, through the Committee on the Recommendation of Teachers, will make every effort to place its students and graduates in the positions for which their general education and professional preparation have equipped them. The committee maintains communication with Superintendents and Boards of Education with reference to vacancies, and invites correspondence from school authorities who are in need of professionally trained teachers. Students of the University, who intend to teach, and graduates of the University, who are now engaged in teaching and who wish to secure better positions, should register with the Appointment Committee. No fee is charged for registration or for any service rendered.

## STATE DIPLOMAS

The 17th General Assembly passed House Bill No. 423 in which Sections 4 and 7 provide as follows:

Sec. 4. The State Board of Education shall issue State diplomas upon application, without examination, to applicants who shall be graduates of colleges situated within the State of Colorado, which maintain a standard four-year course of collegiate work and require four standard years of high school work or its equivalent, for admission, and who shall also exhibit evidence satisfactory to the State Board of Education of good moral character, and who shall also present evidence to the State Board of Education that they have twenty-four months of successful teaching experience, and who shall also produce evidence satisfactory to the State Board of Education, of professional training equivalent to at least one-sixth of a standard four-years' college course in at least three of the following groups of subjects, one of which shall be Practice Teaching, to-wit:

- (1) General and Educational Psychology.
- (2) History of Education.
- (3) Science and Principles of Education.
- (4) Practice Teaching and Special Methods.
- (5) Organization and Management of Schools.
- (6) Philosophy, Sociology, and Anthropology.

Sec. 7. State diplomas, granted under the provisions of this act, shall license the holders thereof to teach in the public schools of any county, city, town, or district in the State without the necessity of any other examination for a period of five years unless sooner revoked by the State Board of Education, and at the expiration of said time, the same may be renewed for a like period of five years in the discretion of the State Board of Education, and at the expiration of this time, the same may be renewed for life upon presentation to the State Board of Education of satisfactory evidence of professional growth and efficiency; *Provided*, That the State Board of Education shall issue upon application, without examination, to those persons who possess the qualifications set forth in Section 4 of this act, experience in teaching alone excepted, a temporary, non-renewable certificate to teach for five years in the public schools of Colorado.

# GRADUATE SCHOOL

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## \*FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

J. RAYMOND BRACKETT, B.A., 1875, Bates; Ph.D., 1880 Yale.  
Professor of Comparative and English Literature; Dean.

IRA M. DELONG, B.A., 1878, M.A., 1881, Simpson College.  
Professor of Mathematics.

†FRED B. R. HELLEMS, B.A., 1893, Toronto; Ph.D., 1898, Chicago.  
Professor of Latin.

CHARLES C. AYER, B.A., 1889, Harvard; Ph.D., 1896, Strasburg.  
Professor of Romance Languages.

GEORGE NORLIN, B.A., 1893, Hastings College; Ph.D., 1899, Chicago.  
Professor of Greek.

FRANCIS RAMALEY, B.S., 1895, Ph.D., 1899, Minnesota.  
Professor of Biology.

MELANCHTHON F. LIBBY, B.A., 1890, Toronto; Ph.D., 1900, Clark.  
Professor of Philosophy.

JOHN B. PHILLIPS, B.A., 1889, M.A., 1891, Indiana; Ph.D., 1897, Cornell.  
Professor of Economics and Sociology.

WILLIAM H. PEASE, B.A., 1894, Toronto; LL.B., 1897, Colorado.  
Professor of Law.

†JOHN BERNARD EKELEY, B.A., 1891, M.A., 1893, Colgate; Ph.D., 1902,  
University of Freiberg in Baden.  
Professor of Chemistry.

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\* This Faculty is made up of the Professors of the various Faculties of the University who offer work in the Graduate School.  
† On leave of absence, 1909-1910.

WALTER RUNGE, B.S., 1906, Colgate; Ph.D., 1909, University of  
Goettingen.

Acting Professor of Chemistry.

RUSSELL D. GEORGE, B.A., 1897, M.A., 1898, McMaster.

Professor of Geology.

JOHN D. FLEMING, B.A., 1875, Central University; LL.B., 1879,  
Louisville.

Professor of Law.

†MILO S. KETCHUM, B.S., 1895, C.E., 1900, Illinois.

Professor of Civil Engineering.

CLEMENT C. WILLIAMS, B.S. (C.E.), 1907, University of Illinois.

C.E., 1909, University of Colorado.

Acting Professor of Civil Engineering.

HERBERT S. EVANS, B.S., 1898, E.E., 1900, Nebraska.

Professor of Electrical Engineering.

JOHN A. HUNTER, B.S., 1890, M.E., 1896, Pennsylvania State College.

Professor of Mechanical Engineering.

THEODORE D. A. COCKERELL,

Professor of Systematic Zoology.

JAMES F. WILLARD, B.S., 1898, Ph.D., 1902, Pennsylvania.

Professor of History.

VIVIAN A. C. HENMON, B.A., 1895, M.A., 1898, Bethany College; Ph.D.,

1905, Columbia.

Professor of Psychology and Education.

OLIVER C. LESTER, B.A., 1897, Central College, Missouri; M.A., 1902, Ph.

D., 1904, Yale.

Professor of Physics.

FRANK E. THOMPSON, B.A., 1901, Stanford.

Professor of Education.

ROSS C. WHITMAN, B.A., 1894, M.D., 1899, Michigan.

Professor of Medicine.

JUNIUS HENDERSON, B.A., 1908, Colorado.

Professor of Natural History and Curator of Museum.

JOHN S. McLUCAS, B.A., 1893, South Carolina College; B.A., 1895, M.A.,

1899, Harvard.

Professor of English.

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† On leave of absence, 1909-1910.

GRACE FLEMING VAN SWERINGEN, B.L., 1893, Cornell; Ph.D., 1904,  
University of Berlin.  
Professor of German.

CLOUGH T. BURNETT, M.D., 1908, Michigan.  
Professor of Bacteriology.

MILO G. DERHAM, B.A., 1892, Cornell; Ph.D., 1904, Colorado.  
Assistant Professor of Latin; Acting Professor.

SAUL EPSTEEN, B.S., 1900, California; Ph.D., 1901, University of Zurich.  
Assistant Professor of Engineering Mathematics; Secretary.

RALPH D. CRAWFORD, B.A., 1905, M.A., 1907, Colorado.  
Assistant Professor of Geology.

DAVID R. JENKINS, B.S., (E.E.), 1904, E.E., 1907, Colorado.  
Assistant Professor of Electrical Engineering.



# GENERAL STATEMENT

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## ANNOUNCEMENT

The University of Colorado offers graduate instruction to those who desire a more liberal education than is afforded by the college or professional course, to those who wish to prepare for the larger duties of citizenship, and to those who wish to become investigators in a special subject. The call in all higher intellectual fields is for a preparation considerably more advanced than the college course. The graduate school of the modern university is the place of professional training for philosophy, languages, literature, science, and the public service; systematic graduate study is invaluable to writers, journalists, teachers, economists, legislators, and special investigators in science and philosophy.

The University of Colorado offers to graduates of colleges and universities the use of its fine library, new laboratories, and advanced courses of study.

Graduate students who meet the requirements for higher degrees, receive personal sympathy in arranging their work, and aid toward securing a start in their chosen career.

## ADMISSION

Graduates from any college or scientific school of good standing are admitted upon presentation of diploma and certificate of good character.

Upon entrance, the student confers with the Dean of the Graduate School regarding the selection of a chief subject of study; the minors are elected on consultation with the professor in charge of the major.

Candidates for the degree Doctor of Philosophy must have a reading knowledge of both French and German. Candidates for the degree Master of Arts must have a reading knowledge of French or German, but the professor in charge of the major subject may require both French and German.

## GRADUATE COMMITTEE

The Graduate Committee consists of the Dean of the Graduate School, the Secretary, and two other professors. The Dean and the Graduate Committee supervise the election of studies, and, after receiving reports from the professors giving instructions, recommend candidates to the Graduate faculty for degrees.

## RESIDENCE

The University of Colorado does not grant credit for work done *in absentia*; but this rule does not apply to graduates of this Institution who are candidates for the degree of Engineer. For a year to count as residence, a student should be located at the University and give his undivided attention to academic work, completing not less than thirty hours.

## ADVANCED STANDING

Credit is given for work done in other universities, but at least one full year of residence at the University is required for each higher degree.

## RECORD OF SCHOLARSHIP

A book is issued to each graduate student in which the Dean enters the courses he is to take. At the end of each semester the student submits his book to each instructor for signature; then to the Dean for record. On leaving the Institution the book becomes his personal property, and is a sufficient evidence of the scope and character of his work.

## FEES AND EXPENSES

There is no tuition fee in the Graduate School; there is a diploma fee of ten dollars. Alumni of other institutions pay a matriculation fee of ten dollars.

## INSTRUCTORSHIPS

Students making special investigations have opportunities to study the teaching of the subjects they pursue, and, if they show special ability may become candidates for instructorships.

## CANDIDATES FOR A DEGREE

**MASTER OF ARTS**—A graduate student wishing to become a candidate for the degree Master of Arts should make special application as soon as possible after matriculation.

**DOCTOR OF PHILOSOPHY**—A student entering the University for the first time should work some months, that his ability may be known, before applying for enrollment as a candidate for the degree Doctor of Philosophy.

Applications for candidacy should include a programme of studies leading to the degree, a list of undergraduate work in the same lines, a statement of any original work already accomplished, and an enumeration of honors and degrees.

## REQUIREMENTS FOR DEGREES

Candidates for the degree Master of Arts or Doctor of Philosophy must present credits for at least one year's residence at this University, and evidence of having completed a course of study approved by the Dean and Graduate Committee.

**MASTER OF ARTS**—The work required is one full year. Six copies of the Master's thesis or dissertation, printed or typewritten and bound, are to be placed in the University library.

**DOCTOR OF PHILOSOPHY**—The work required is three years' of residence, which shall include as a minimum, 5 semesters of 12 hours each and a thesis. The first two years may be spent at other universities in actual residence; or the first two years may be done here and the third spent in the preparation of a thesis at some approved university.

The thesis for the Doctor's degree must show power in original investigation; it is printed and one hundred and fifty copies placed in the University library for the use of the University.

Students applying credits from other universities should bring letters from their instructors showing quality and amount of work. The final examination covers all subjects presented for the degree, whether done here or elsewhere.

The following degrees are offered to students specially prepared in Engineering:

**MASTER OF SCIENCE**—A candidate for the degree Master of Science must have previously received the degree B.S. in Engineering from this

University; or if graduated elsewhere, he must satisfy the Faculty that he possesses equivalent attainments. He must choose a major subject to occupy one-half his time from the graduate courses offered in the line in which he received his Bachelor's degree. Study and residence for not less than one year and a thesis on an approved subject are required. A year's work includes thirty hours, of which not less than six hours should be given to the thesis.

CIVIL ENGINEER, ELECTRICAL ENGINEER, MECHANICAL ENGINEER—The degree of Engineer may be conferred upon a Bachelor of Science of this University who has taken the B.S. degree in the course for which he is a candidate for the higher degree, if he furnish satisfactory evidence that he has pursued further technical studies for at least one year, has presented a satisfactory thesis on an approved engineering topic, and in addition has been employed in professional work in positions of responsibility for at least another year. If the candidate does not reside at the University, his course of study must be approved in advance by the professor in charge of the department; and he must prepare an approved thesis on some engineering topic to be presented together with a detailed account of his professional work, at least one month before the annual commencement at which he expects to take his degree. Candidates must be registered for two years in advance of the commencement at which the degree is to be conferred.

Graduates of other institutions must complete one year of work and residence in this University.

## INSTRUCTION

Students admitted to the Graduate School may pursue any course in the College of Liberal Arts, College of Engineering and professional schools for which they are qualified.

The Graduate Faculty does not put hindrances in the way of mature students; almost any reasonable programme of study will be approved if it forms a consistent plan of work or is to be pursued with some definite aim.

But courses will be counted towards a degree only when recommended for that purpose by the professors in charge of such courses.

The courses of study offered especially to graduate students may be grouped as follows:

- I. Greek Language and Literature.
- II. Latin Language and Literature.
- III. Germanic Languages and Literature.
- IV. Romance Languages and Literatures.
- V. Literature (in English).
- VI. English Language.
- VII. Mathematics.
- VIII. Civil Engineering.
- IX. Electrical Engineering.
- X. Mechanical Engineering.
- XI. Physics.
- XII. Chemistry.
- XIII. Biology.
- XIV. Geology.
- XV. Philosophy.
- XVI. Psychology.
- XVII. Education.
- XVIII. History.
- XIX. Law.
- XX. Social Science.
- XXI. Music.



## \*DESCRIPTION OF COURSES

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### I. GREEK LANGUAGE AND LITERATURE

PROFESSOR NORLIN:—

11. THE GREEK PASTORAL.  
With special study of Theocritus.
12. PLATO.  
Interpretation of the Republic.
13. THUCYDIDES.
14. LYRIC POETS, INCLUDING PINDAR AND BACCHYLIDES.
15. GREEK TRAGIC POETS.

*For Graduates Only.*

22. ARISTOTLE'S POLITICS AND CONSTITUTION OF ATHENS.
23. HISTORY OF GREEK COMEDY.
24. INTRODUCTION TO GREEK EPIGRAPHY.
25. STUDY OF GREEK DIALECTS FROM INSCRIPTIONS.
26. SEMINAR IN POETS OF ALEXANDRIAN PERIOD.
27. SEMINAR IN EARLY GREEK PHILOSOPHY.
28. SEMINAR IN GREEK MYTHOLOGY AND RELIGION.

### II. LATIN LANGUAGE AND LITERATURE

PROFESSOR HELLEMS AND ASSISTANT PROFESSOR DERHAM:—

16. LUCRETIVS.
19. MARTIAL.
22. SUETONIUS.

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\* The graduate courses, which may be elected by under graduates also, are listed under the same numbers as in the College of Liberal Arts. The courses for graduates only are described here.

## 24. ADVANCED LATIN PROSE.

## 25. GREEK AND ROMAN ARCHÆOLOGY.

*For Graduates Only.*

## 26. ROMAN LAW.

(1) Gaii Institutiones Juris Civilis. 3 h.

(2) Elements of Roman Law. 2 h.

## 27. ROMAN ADMINISTRATION. 3 h.

The development of Roman public institutions in their historical sequence.

## 28. ROMAN TOPOGRAPHY. 2 h.

The topography of Rome in the historical development of the city.

## 29. INTERPRETATION OF EARLY LATIN. 2 h.

Selected examples of Early Latin.

## 30. EPIGRAPHY. 2 h.

Cagnat's Cours d'Epigraphie Latine; Egbert's Introduction; handling of the Corpus Inscriptionum Latinarum.

## 31. LATIN MORPHOLOGY. 2 h.

The subject will be approached from the comparative side.

## 32. LATIN SYNTAX. 2 h.

The subject will be treated comparatively.

## 33. LATIN PALÆOGRAPHY. 2 h.

An introduction to the subject.

## 34. SEMINAR ON DOMITIAN.

A study of the sources for the life and reign of Domitian; particular stress will be laid on the epigraphical side.

## 35. TACITUS. 2 h.

A rapid reading course in the Annals with a consideration of the historical problems raised.

## 36. PERSIUS. 2 h.

Interpretation of the text; Stoicism in the early Empire.

## 37. ROMAN PROVINCIAL ADMINISTRATION.

Pliny, Letters, book X; selections from Cicero's correspondence.

## III. GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VAN SWERINGEN:—

## GERMAN.

8. THE GERMAN DRAMA OF THE NINETEENTH CENTURY.  
 11. GÖTTE'S FAUST.

*For Graduates Only.*

18. THE HISTORY OF GERMAN LITERATURE FROM THE EARLIEST TIMES TO THE TIME OF KLOPSTOCK. *First semester.* 3 h.  
 Lectures; collateral reading; papers.  
 19. THE HISTORY OF GERMAN LITERATURE FROM THE TIME OF KLOPSTOCK TO THE PRESENT. *Second semester.* 3 h.  
 Lectures; collateral reading; papers.  
 20. OLD HIGH GERMAN. *Two semesters.* 2 h.  
 Braune's Althochdeutsche Grammatik, and Althochdeutsches Lesebuch.  
 21. MIDDLE HIGH GERMAN. *Two semesters.* 2 h.  
 Paul's Mittelhochdeutsche Grammatik; reading of Hartman von der Aue's Der Arme Heinrich.  
 22. GERMANIC HERO-SAGAS. *One semester.* 3 h.  
 Lectures; recitations, and collateral reading.  
 23. GERMANIC MYTHOLOGY. *One semester.* 3 h.  
 Primitive Germanic religion, customs, and ideas of life, in their relation to German literature.  
 Lectures; recitations; collateral reading.

## GOTHIC.

*For Graduates Only.*

24. GOTHIC. *One semester.* 2 h.  
 Phonology and inflections of Gothic; relation of Gothic to German and English; reading of extracts in Braune's Gotische Grammatik.

## SCANDINAVIAN.

*For Graduates Only.*

25. OLD ICELANDIC. *Two semesters.* 2 h.  
 Phonology and inflection of Old Icelandic, from Noreen's Altisländische und Altnorwegische Grammatik.  
 Reading of Heusler's Zwei Isländer-Geschichten.

## IV. ROMANCE LANGUAGES AND LITERATURE

PROFESSOR AYER:—

## FRENCH.

## 7-8. HISTORY OF FRENCH LITERATURE.

*For Graduates Only.*

9. OLD FRENCH GRAMMAR AND COMPARATIVE ROMANCE PHILOLOGY.  
2 h.
10. READING OF OLD FRENCH TEXTS. 2 h.  
Bartsch's Chrestomathie de l'Ancien Francais.
11. COMPARATIVE ROMANCE SYNTAX, ON BASIS OF FRENCH. 2 h.

## SPANISH.

5. LOPE DE VEGA AND CALDERON.
6. ADVANCED PROSE COMPOSITION.

*For Graduates Only.*

7. INTRODUCTION TO OLD SPANISH.  
Lectures and seminar exercises.  
Comparative Romance Philology, with special reference to Spanish, Keller's Altspanisches Lesebuch; El Poema del Cid.

## ITALIAN.

3. THE LIFE AND WORKS OF DANTE.
4. PETRARCH AND BOCCACCIO.

*For Graduates Only.*

5. INTRODUCTION TO OLD ITALIAN.  
Lectures and seminar exercises.  
Comparative Romance Philology, with special reference to Italian. Monaci's Crestomazia Italiana dei primi secoli.

## V. COMPARATIVE AND ENGLISH LITERATURE

PROFESSOR BRACKETT:—

- 12-13. COMPARATIVE LITERATURE.
- 14-15. THE EPIC.

16-17. WORLD DRAMA.

18-19. THE GREAT DRAMA.

*For Graduates Only.*

20. THE HISTORY OF ENGLISH LITERATURE.

Study of selected periods; the Elizabethan period; the age of Milton; the nineteenth century; contemporary authors.

21. STUDIES IN VICTORIAN LITERATURE AND ART. *Throughout the year.*  
11:30. 5 h.

Ruskin and Turner; the Pre-Raphælite Movement; the Rossettis; Burne-Jones; Holman-Hunt; George Frederick Watts; William Morris; Walter Crane. 1908.

22. THE PREDECESSORS OF SHAKESPEARE. 5 h. 1904.

23. THE RENAISSANCE IN EUROPE. 5 h. 1909.

24. ROMANTICISM.

25. MASTERPIECES OF FICTION FROM THE EARLIEST TIMES.

26. THE TEACHING OF LITERATURE.

## VI. ENGLISH LANGUAGE

PROFESSOR McLUCAS:—

7. HISTORY OF ENGLISH LANGUAGE.

8-9. ANGLO-SAXON.

10. MIDDLE ENGLISH.

11. CHAUCER.

12-13. SHAKESPEARE.

14. PRE-SHAKESPEAREAN DRAMA.

## VII. MATHEMATICS

PROFESSOR DELONG AND ASSISTANT PROFESSOR EPSTEEN.

4. DIFFERENTIAL CALCULUS.

5. INTEGRAL CALCULUS.

13. SOLID ANALYTIC GEOMETRY.

*\* For Graduates Only.*

EITHER SEMESTER

(Credits and hours to be arranged.)

15. ADVANCED ANALYTIC GEOMETRY.  
Course 3 prerequisite.
16. THEORY OF EQUATIONS.
17. THEORY OF FUNCTIONS.  
Course 5 prerequisite.
18. HYPERCOMPLEX NUMBER SYSTEMS.
19. CONTINUOUS GROUPS.  
Courses 5 and 6 prerequisite.
20. PARTIAL DIFFERENTIAL EQUATIONS, WITH APPLICATIONS IN GEOMETRY AND PHYSICS.  
Courses 6 and 13 prerequisite.
21. SELECTED TOPICS IN HIGHER MATHEMATICS.
22. MATHEMATICAL SEMINAR.

## VIII. CIVIL ENGINEERING

PROFESSOR KETCHUM:—

*For Graduates Only.*

101. RAILWAY LOCATION AND CONSTRUCTION.
102. YARDS AND TERMINALS.
103. SIGNAL ENGINEERING.
104. RAILWAY OPERATION AND MANAGEMENT.
105. TUNNELS AND CANALS.
110. ADVANCED BRIDGE DESIGN.
111. SWING AND MOVABLE BRIDGES.
112. METALLIC ARCHES.
113. INDETERMINATE STRUCTURES.
114. STEEL OFFICE BUILDING CONSTRUCTION.
115. STEEL MINE AND MILL STRUCTURES.
120. REINFORCED CONCRETE CONSTRUCTION.

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\* Not more than two of the courses, 15-22 inclusive, will be offered in any one semester.



- 130. GENERAL WATER WORKS CONSTRUCTION AND MANAGEMENT.
- 131. TANKS, STANDPIPES AND RESERVOIRS.
- 140. SEWAGE PURIFICATION AND DISPOSAL WORKS.
- 141. GENERAL SEWERAGE DESIGN AND CONSTRUCTION.
- 150. IRRIGATION ENGINEERING STRUCTURES.
- 151. IRRIGATION ENGINEERING STUDIES.
- 152. DAMS AND RESERVOIRS FOR IRRIGATION.
- 160. HYDRAULICS.
- 161. HYDRAULICS OF RIVERS, WEIRS AND SLUICES.

## IX. ELECTRICAL ENGINEERING

PROFESSOR EVANS:—

*For Graduates Only.*

- 101. THEORY OF ALTERNATING CURRENTS.
- 102. ANALYSIS AND DESIGN OF ALTERNATING CURRENT APPARATUS.
- 103. ANALYSIS AND DESIGN OF DIRECT CURRENT APPARATUS.
- 104. SWITCHBOARD DESIGN AND CONSTRUCTION.
- 105. THE TESTING OF ELECTRICAL MACHINERY.
- 106. ELECTRICAL ENGINEERING RESEARCH.
- 107. TELEPHONES AND TELEGRAPH.
- 108. ELECTRICAL TRANSMISSION OF POWER.
- 109. ELECTRIC LIGHT AND POWER PLANTS.
- 110. ELECTRO-METALLURGICAL INDUSTRIES.
- 111. ADVANCED ELECTRICAL ENGINEERING LABORATORY.

## X. MECHANICAL ENGINEERING

PROFESSOR HUNTER:—

*For Graduates Only.*

- 101. ADVANCED MACHINE DESIGN.
- 102. GRAPHICS AND KINEMATICS.
- 103. ADVANCED STEAM ENGINEERING.
- 104. EXPERIMENTAL ENGINEERING.
- 105. PNEUMATICS.

106. LOCOMOTIVE ENGINEERING.  
107. MECHANICAL REFRIGERATION.

### \*XI. PHYSICS

PROFESSOR LESTER:—

6. THEORETICAL MECHANICS.  
7. THEORY OF ELECTRICITY AND MAGNETISM.  
8-9. ELECTRICAL MEASUREMENTS. Credit according to the amount and nature of the work.  
Prerequisites: Courses 1, 2, 3, and 4 and calculus.  
10. THEORY OF ELECTRICITY AND MAGNETISM. Hours to be arranged.  
11-12. INTRODUCTION TO THEORETICAL PHYSICS. Hours to be arranged.  
Prerequisites: Courses 1, 2, and 6 and calculus.  
13-14. ADVANCED EXPERIMENTAL PHYSICS.  
Prerequisites: Courses 1, 2, 3 and 4 and calculus; also to be taken with or to follow Course 11-12.  
15. THEORY OF ELECTRONS.  
Prerequisites: Courses 1, 2, 6, 7, or 11 and Calculus.

*For Graduates Only.*

16. RADIO-ACTIVITY. *First semester.* 1 h. *Second semester.* 2 h.  
A reading course embracing the discovery of radio-activity, the chemical and physical properties of the radio-active substances, and the recent investigations concerning them. This is supplemented, in the second semester, by laboratory work on the methods of detecting and measuring radio-activity.  
17. ADVANCED MECHANICS. *Both semesters.* 2 or 3 h.  
This course is designed primarily for students intending to specialize in the physical and mathematical sciences. Special emphasis is laid upon general principles. Among the subjects considered are: force, moment, impulse and energy, equations; damped and forced vibrations; central forces; D'Alembert's principle; elasticity; Green's theorem and the theory of potential; Lagrange's equations; principle of least action.  
Prerequisites: Course 6 and advanced calculus, differential equations.

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\* Each course is given annually with the exception of 10 and 12, which are given when there is sufficient demand.

## XII. CHEMISTRY

PROFESSOR EKELEY:—

- 3-4. QUALITATIVE ANALYSIS.
- 5-6. QUANTITATIVE ANALYSIS.
- 7. IRON AND STEEL ANALYSIS.
- 11. GAS ANALYSIS.
- 12. ORGANIC CHEMISTRY.
- 14. ORGANIC PREPARATIONS.
- 16. FOOD ANALYSIS.
- 17. PHYSICAL CHEMISTRY.
- 19. ELECTRO-CHEMISTRY.
- 22. LABORATORY PRACTICE IN PHYSICAL AND ELECTRO-CHEMISTRY.

*For Graduates Only.*

- 23. ADVANCED ORE ANALYSIS.

NOTE—Candidates for the Master's degree, taking chemistry as a major, must have completed courses No. 1, 2, 3, 4, 5, 6, 7, 10, 12, 14, 17, 18, 19, 22. Courses from No. 6 on may be counted toward the thirty-hour requirement, in case they have not already been counted towards the bachelor's degree. In such cases special courses in chemistry may be arranged for.

## XIII. BIOLOGY

## BOTANY

PROFESSOR RAMALEY:—

*For Graduates Only.*

- 12. PLANT ECOLOGY.

In this course the student becomes acquainted with the principles of ecological plant geography and the physiological facts which are necessary for an understanding of those principles. In particular the student is made acquainted with the plant geography of Colorado and of North America and of special areas which may be readily studied.

Research work in ecology is provided at the mountain laboratory at Tolland, Colorado.

## 13. PLANT ANATOMY.

A general account of the history of plant anatomy and the recent developments of the subject with practical laboratory investigation of special groups.

## 14. ALGOLOGY.

A study of the classification of algæ, both fresh-water and marine; examination of a large series of specimens.

## ZOOLOGY.

PROFESSORS RAMALEY AND COCKERELL:—

*For Graduates Only.*

## 12. EMBRYOLOGY OF VERTEBRATES.

A part of the work will be done with the regular under-graduate class in this subject but special topics will be assigned to graduate students.

## 13. HISTOLOGY.

Investigation of problems of structure in certain animals not thus far studied.

## 14. SPECIAL PROBLEMS.

Palæo-entomology, Ichthyology, Taxonomy of Hymenoptera, Coccidæ, (scale insects) and others as opportunity offers.

## XIV. GEOLOGY

PROFESSORS GEORGE, HENDERSON, AND ASSISTANT PROFESSOR CRAWFORD.

## 7-8. ECONOMIC GEOLOGY.

## 9-10. MINERALOGY, DESCRIPTIVE AND DETERMINATIVE.

## 11. QUANTITATIVE MINERALOGY.

## 12. GEOLOGY OF COLORADO.

## 13. GEOLOGICAL MATERIALS FOR INDUSTRIAL CHEMISTRY.

## 14-15. ADVANCED FIELD GEOLOGY.

## 16-17. PALEONTOLOGY.

*For Graduates Only.*

18-19. PETROGRAPHY. *Both semesters. Three single and two double periods per week.* Hours will be arranged.

The mineral and chemical composition of rocks, their occurrence, origin, structural features and classification, and a detailed study

of the more important rock families. The study of rock sections with the microscope will form an important part of the course.

Prerequisites: Courses 1-2, 9-10, or equivalent work.

20. **ADVANCED GEOLOGY.** *One or both semesters.*

The work will be chiefly individual and will depend largely on the previous training of the student. The vicinity of Boulder offers a wide range of problems for research work. The credit allowed will depend upon the time given to the work and the character of the results as shown by the reports, maps, etc.

Prerequisite: Previous training in one or more lines of geological work.

NOTE—The establishment of the State Geological Survey has given very exceptional opportunities to a limited number of advanced students in the geological departments of the colleges of the State.

## XV. PHILOSOPHY

PROFESSOR LIBBY:—

5-6. **INTRODUCTION TO PHILOSOPHY.**

7. **ETHICS.**

8. **LOGIC.**

9. **ÆSTHETICS.**

10. **METAPHYSICAL SEMINAR.**

*For M.A.*

For major, these courses, and advanced readings in sources of philosophy, and in metaphysics; for minor, courses 1, 2, 3, 4, only.

*For Ph.D.*

For major, courses for M.A. major, with further advances in history of philosophy and in special disciplines. For minor, history of philosophy only, including special knowledge of two philosophers.

## XVI. PSYCHOLOGY

PROFESSORS HENMON AND THOMPSON:—

3. **ADVANCED PSYCHOLOGY.**

4-5. **EXPERIMENTAL PSYCHOLOGY.**

6. **SOCIAL PSYCHOLOGY.** (EDUCATION 11.)

7. CHILD STUDY. (EDUCATION 13.)
11. PRACTICUM IN PSYCHOLOGY.

*For Graduates Only.*

12. ADVANCED EXPERIMENTAL PSYCHOLOGY.

Students in this course will be expected to carry on systematic investigations in special problems.

## XVII. EDUCATION

PROFESSORS THOMPSON, HENMON, AND LIBBY:—

9. HISTORY OF ANCIENT AND MEDIEVAL EDUCATION.
10. HISTORY OF MODERN EDUCATION.
11. SOCIAL PSYCHOLOGY. (PSYCHOLOGY 6.)
12. CONTEMPORARY EDUCATIONAL PROBLEMS.
13. CHILD STUDY. (PSYCHOLOGY 7.)
16. PRACTICUM IN EDUCATION.

## XVIII. HISTORY

PROFESSOR WILLARD:—

7. AMERICAN COLONIAL HISTORY.
8. CIVIL WAR AND RECONSTRUCTION.
9. THE MEDIEVAL CHURCH AND THE REFORMATION.

*For Graduates Only.*

11. ENGLAND IN THE FOURTEENTH CENTURY. *Throughout the year.*  
*Th. 2:00-4:00. 2 h.*

A seminar course on the social, economic, and political history of England during the fourteenth century; intended to teach methods of research in European history to those who desire to specialize in that subject. Not given in 1910-1911.

## XIX. LAW

PROFESSOR FLEMING:—

- CONSTITUTIONAL LAW. 4 h.  
SALES OF PERSONAL PROPERTY. 4 h.  
IRRIGATION. 3 h.



PROFESSOR REED:—

BILLS AND NOTES. 5 h.

PRIVATE AND MUNICIPAL CORPORATIONS. 5 h.

DOMESTIC RELATIONS. 3 h.

PROFESSOR PEASE:—

REAL PROPERTY. 5 h.

LAW OF CONTRACTS. 5 h.

MR. FOLSOM:—

BAILMENTS AND CARRIERS. 2 h.

## XX. SOCIAL SCIENCE

PROFESSOR PHILLIPS:—

5. PRINCIPLES OF SOCIOLOGY.
6. PROBLEMS IN SOCIOLOGY.
7. THEORY AND APPLICATION OF STATISTICS.
8. NATIONAL ADMINISTRATION.
9. STATE AND LOCAL GOVERNMENT.
10. POLITICS.
11. POLITICAL PARTIES AND PARTY PROBLEMS.
12. CITY GOVERNMENT IN THE UNITED STATES.
13. CITY GOVERNMENT IN COLORADO.
14. CONSULAR AND DIPLOMATIC SERVICE.
15. HISTORY OF COMMERCE.
16. ECONOMIC AND COMMERCIAL GEOGRAPHY.
17. CURRENT ECONOMIC PROBLEMS.
18. MONEY AND BANKING.
19. TRANSPORTATION.
20. CORPORATION FINANCE.
21. TAXATION.
22. THEORY OF INVESTMENTS (LIFE INSURANCE, ETC.)
23. THEORY AND PRACTICE OF ACCOUNTING.

*For Graduates Only.*

24. HISTORY AND CRITICISM OF ECONOMIC THEORIES. *First semester.*  
12:00. 2 h.

Lectures, reading, reports.

The lectures will deal with the economic ideas of Plato and Aristotle; the influence of the Roman Law; the Canonists; Mercantilists; Physiocrats; Adam Smith; Ricardo; Malthus; John Stuart Mill; the Historical School; Jevons and the Austrian School. The aim is not only to study the content of economic theory, but also to exhibit theory in the light of political and social conditions.

25. SEMINAR IN ECONOMICS AND SOCIOLOGY. *Throughout the year.*  
2 h.

## XXI. MUSIC

PROFESSOR CHADWICK:—

4. CANON AND FUGUE.
5. COMPOSITION AND ORCHESTRATION.
6. HISTORY OF MUSIC.
8. ÆSTHETICS AND PHILOSOPHY OF MUSIC.

# COLLEGE OF ENGINEERING

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## FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

\* MILO S. KETCHUM, C.E., Dean,  
Professor of Civil Engineering.

CLEMENT C. WILLIAMS, C.E.,  
Acting Professor of Civil Engineering.

HERBERT S. EVANS, E.E., Acting Dean,  
Professor of Electrical Engineering.

JOHN A. HUNTER, M.E.,  
Professor of Mechanical Engineering.

CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

JOHN B. PHILLIPS, Ph.D.,  
Professor of Economics and Sociology.

\* JOHN BERNARD EKELEY, Ph.D.,  
Professor of Chemistry.

RUSSELL D. GEORGE, M.A.,  
Professor of Geology.

OLIVER C. LESTER, Ph.D.,  
Professor of Physics.

JOHN S. McLUCAS, M.A.,  
Professor of English.

GRACE FLEMING VAN SWERINGEN, Ph.D.,  
Professor of German.

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\* On leave of absence, 1909-1910.

CLOUGH T. BURNETT, M.D.,  
Professor of Bacteriology.

SAUL EPSTEIN, Ph.D.,  
Assistant Professor of Engineering Mathematics.

DAVID R. JENKINS, E.E.,  
Assistant Professor of Electrical Engineering.

GEORGE L. SULLIVAN, B.S. (M.E.),  
Instructor in Mechanical Engineering.

AXEL E. BERGGREN, B.S. (M.E.),  
Instructor in Mechanical Engineering.

GEORGE I. GAY, B.S. (C.E.),  
Instructor in Civil Engineering.

GUY W. SMITH, B.S. (E.E.), M.S.,  
Instructor in Engineering Mathematics.

FREDERICK W. DOOLITTLE, B.A., B.S. (C.E.),  
Instructor in Civil Engineering.

EDWARD C. STOCKER, B.S. (C.E.),  
Instructor in Civil Engineering.

OLLISON CRAIG, B.S. (M.E.),  
Instructor in Mechanical Engineering.

HARLAND C. WOODS, B.S. (C.E.),  
Instructor in Engineering Drawing.

MARGARET S. CARHART, M.A.,  
Instructor in Engineering English.

MILDRED S. MCARTHUR, M.A.,  
Instructor in German.

LAURENCE D. JONES, B.S. (E.E.),  
Assistant in Electrical Engineering.

JAMES S. DEREMER,  
Assistant in Electrical Engineering.

SIEBELT L. SIMMERING,  
Assistant in Shops.

JOSEPH B. MORRILL,  
Assistant in Engineering Mathematics.

FLOYD H. MILLARD,  
Assistant in Engineering Mathematics.

HENRY DENDAHL, B.S. (C.E.),  
Assistant in Engineering Drawing.

*STAFF OF THE U. S. GOVERNMENT TIMBER TESTING STATION*

NORMAN DE W. BETTS, M.E.,  
Engineer in Charge.

ALFRED D. WOLFF, JR., B.S. (C.E.),  
Engineer in Timber Tests.

HENRY V. BLANK, B.S. (C.E.),  
Engineer in Timber Tests.

# GENERAL STATEMENT

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## PURPOSE

In accordance with the provisions of the Charter of the University, a School of Applied Science was authorized by the Board of Regents, and established in 1893. The name of the Department was changed to the College of Engineering, September, 1906.

It is the object of the College to provide thorough technological education of the highest grade. To this end there is combined with a broad theoretical training a very considerable amount of practical work in the shops and laboratories, supplemented by visits to large manufacturing establishments and power installations.

Regular courses of study, extending over four years, are offered in Civil, Electrical, Mechanical, and Chemical Engineering.

The work of the first two years of all courses, with a few minor exceptions, is the same. It is aimed in these years to lay a broad foundation for the more specialized work of the last two years. To this end the work is largely theoretical in character, and comprises courses in Mathematics, General Chemistry and Physics, Mechanical Drawing, Languages, and the Elements of Engineering subjects. Classroom and lecture work is supplemented wherever practicable by laboratory courses.

In the last two years the work is more specialized, and the fourth year is almost entirely devoted to technical work in the several branches of Engineering.

## REQUIREMENTS FOR ADMISSION

See page 54.

## ADMISSION TO ADVANCED STANDING

Students from other institutions will be admitted to any class not later than the first term of the senior year on passing examinations in the subjects given in the preceding years in the College of Engineer-



ing, or on presentation of satisfactory certificates, showing that the required work has been done in other technical schools. A certificate of honorable dismissal will also be required.

Graduates from other colleges will be admitted without examination, and allowed to pursue such courses as their previous work will permit.

By proper election of subjects in the collegiate course, such as sciences, mathematics, and languages, a graduate of the arts department can obtain his engineering degree in two years. Such a course affords a very broad general training, and is to be highly recommended.

## DEGREES

Upon the satisfactory completion of the prescribed and elective work in any course, the degree, Bachelor of Science in the course pursued, will be conferred.

As a prerequisite to graduation, each student is required to present a satisfactory thesis on a subject requiring original research work along technical lines, or an extended study of some engineering problem or appliance.

The degree of Master of Science (M.S.) is given upon completion of one year's graduate work in residence after having obtained the degree of Bachelor of Science in Engineering. The year's work requires thirty (30) semester hours' credit, of which at least six (6) hours shall be devoted to a thesis.

The degree of Civil Engineer (C.E.), Electrical Engineer (E.E.), or Mechanical Engineer (M.E.), is given for one year's academic **work**, and a thesis, after the candidate has had at least one year's responsible charge of engineering work. The academic work need not be done in residence. A candidate must be registered for at least two years before coming up for the degree of Engineer.

For further details of graduate work see the Graduate School.

## EQUIPMENT

### BUILDINGS.

The College of Engineering occupies the Engineering Building and the Engineering Shops situated at the eastern end of the Quadrangle. The buildings are well planned for Engineering instruction and are devoted entirely to the technical work of the College.

ENGINEERING BUILDING—The basement contains the applied mechanics, timber testing, hydraulic and cement laboratories.

On the first floor are located the electrical and mechanical engineering laboratories, senior electrical and mechanical engineering drawing rooms, and class rooms.

The second floor is devoted to drawing and instrument rooms for the civil engineering department, general class rooms and the reading room.

The laboratories, class rooms and drawing rooms are commodious and well lighted.

All buildings on the campus are heated and lighted from a central power plant.

ENGINEERING SHOPS—The Shop Building consists of a one-story section containing a foundry forty by forty feet, a forge shop forty by forty feet, and a machine shop forty by eighty feet; and a two-story section containing a wood-bench shop forty by forty feet, and a wood-turning shop forty by forty feet on the first floor, and a freshman drawing room forty by eighty feet on the second floor. The one-story section is lighted by means of a modified saw-tooth roof.

#### CIVIL ENGINEERING EQUIPMENT.

The department of Civil Engineering possesses an extensive equipment of surveying instruments of the various standard makes, consisting of engineer's transits, solar attachments, mining transits, compasses, engineer's levels, solar compasses, plane tables, a sextant, barometers, chains and tapes, as well as smaller instruments. For use in surveying field work the department has a 100-foot standard of length, and a triangulation system with permanent monuments and a meridian and base line.

The department has two Leyner rock drills, mounted and equipped for illustrative and testing purposes.

The department also possesses an ample collection of drawings, blue prints, and photographs for use in design. Among the most valuable collections of plans for students' use are a set of detail plans of the A. T. & S. F. R. R. standard plate girder and truss bridges, donated by Mr. A. F. Robinson; and numerous detail plans of structures donated by the American Bridge Company. Blue print frames, an excellent selection of steel T squares, straight edges and protractors, planimeters, scales, slide rules, and other special drawing tools are available to the student for the courses which involve drafting.

## CEMENT LABORATORY.

The Cement Laboratory is equipped with a two thousand pound Fairbank's shot machine, a two thousand pound Riehle cement machine, briquette molds, tanks, Gilmore needles, vicat apparatus, sieves, hot water tanks, specific gravity apparatus, slate slabs, sample barrels of cement, and other necessary apparatus.

## HYDRAULIC LABORATORY.

The equipment of the Hydraulic Laboratory consists of a tank in the third story of the building, affording a constant head, and in the laboratory, tanks supplied with various shaped notches and orifices for discharge instruments, channels of various shapes, standard orifices and tubes. The laboratory also contains a Venturi meter, water meters, piezometers, a current meter, an A Doble 12-inch experimental water wheel equipped for experimental work, Pitot's tubes, a hook gage, platform scales, hose, and various smaller pieces of hydraulic apparatus.

## LABORATORY OF APPLIED MECHANICS.

The laboratory of Applied Mechanics is equipped with a 30,000-pound Olsen testing machine direct connected to an electric motor; a 100,000-pound Olsen testing machine driven by an electric motor; a 200,000-pound Riehle testing machine that will test a 16-foot beam and an 8-foot column, direct connected to an electric motor; extensometer; compressometers; a 50,000-in.-lb. Olsen torsion testing machine, direct connected to an electric motor, a flexure machine; and miscellaneous small tools and apparatus necessary for making commercial tests of iron, steel, brick, stone, and wood. The laboratory is equipped with an Olsen brick rattler, and all other equipment necessary for making commercial tests of paving brick. The equipment of the cement laboratory is available for work in testing cements, mortars, and concrete.

## U. S. GOVERNMENT TIMBER TESTING STATION.

In addition to the above equipment the laboratory of Applied Mechanics contains the following additional equipment especially designed for the work of the U. S. Government Timber Testing Station: A Greaves & Klusman No. 3 planer driven by an electric motor; a J. A. Fay & Egan No. 77 rip and crosscut saw driven by an electric motor; a drying oven; a three point loader; a photographic dark room with full equipment; and miscellaneous tools. The laboratory has an over-

head track and a one-ton hoist for handling heavy timbers and reinforced concrete beams. All apparatus in the laboratory is available for instructional purposes.

#### ELECTRICAL ENGINEERING LABORATORIES.

The Electrical Engineering Laboratories are well equipped for the study of direct and alternating current apparatus, electrical testing and the investigation of problems concerning the design, installation and operation of electrical apparatus.

The laboratories include in their equipment a 50 H. P. alternating current motor, three phase; a 30 K.W. direct current, compound generator, belted type; a 10 K.W. rotary converter of special design, with six collector rings and arranged for operation as a single phase, two phase or three phase machine, compound wound and equipped with dampers, and all necessary starting and regulating devices; a  $7\frac{1}{2}$  K. W. double current generator, 60 cycles A. C. and arranged for operation as a single phase or two phase machine; a  $7\frac{1}{2}$  K.W. revolving field alternator, the armature windings of which are wound in sections, the ends of each section being brought out to suitable terminal blocks, and designed to give single, two, three, or six phase currents; a 10 horse power U. S. shunt generator; two 3 horse power bi-polar machines, for use as direct current motors or generators; a  $7\frac{1}{2}$  K.W. three phase induction motor, with three interchangeable rotors, representing the three commercial types, squirrel cage, internal, and external resistance; a starting resistance and controller for the above induction motor; a 10 horse power alternating current series compensated motor with suitable controller; a twenty-light Brush arc lighting dynamo; a 30-ampere mercury rectifier; a 20 K.W. direct current, compound motor; a two-phase, 1 horse power inductor motor, and several small generators and motors. The electrical equipment of shops and heating system are also available for special tests and investigations. The transformer equipment comprises types of modern transformers of various sizes; two sets of transformers for two to three phase transformation or vice versa; an auto-transformer of special design, giving a wide range of voltages; a twelve-light constant current transformer, and other transformers for special purposes. The photometer room is large and well ventilated. It contains a Reichsanstalt photometer with a two meter scale, equipped with both Bunsen and Lummer Brodhum screens, and a special integrating arc light photometer. The standards include an amyl acetate lamp with Reichsanstalt certificate and aged incandescent lamps

which have been compared with the best available standards. The necessary accessories for exact photometric work, such as lamp holders, spinners, rheostats, etc., are included in the equipment. Cooper Hewitt (Mercury Vapor) lamps, are lamps of various makes and types, Nernst and other forms of incandescent lamps are included in the equipment.

The department possesses a large equipment of wattmeters, alternating and direct current ammeters and voltmeters of various ranges and representative makes.

The calibrating equipment includes a Kelvin Composite Balance, a Weston millivoltmeter with shunts, and a Weston Laboratory Standard Voltmeter with the regulating devices needed for such purposes.

A great variety of integrating wattmeters are used for experimental purposes and synchronizers, water rheostats, two lamp banks, a transformer bank and other accessories are provided for testing work. Two test tables designed to be easily moved from room to room and provided with individual lamp blank resistance, one three-phase test table, one direct current table, and a three-phase induction coil are also included in the laboratory equipment.

The University power plant affords the students an excellent opportunity for making commercial tests. The equipment consists of a 150 K.W. three-phase slow speed unit; a 75 K.W. three-phase direct connected alternator with belted exciter; a 35 K.W. direct current compound generator, direct connected; a 25 K.W. steam turbine exciter unit; a 35 K.W. motor generator set; and a thoroughly modern ten panel switchboard.

#### MECHANICAL ENGINEERING LABORATORY.

The Mechanical Laboratory contains the following apparatus for instructing students in practical experimental engineering: Viscosimeters and similar apparatus for testing viscosity and other qualities of lubricating oils; calorimeters for determining dryness and heat of steam; injectors and water meters for measuring water for boiler trials; thermometers and pyrometers for measurement of temperatures; bunte gas burettes and chemical re-agents for tests of chimney flue gases; anemometers for study of heating and ventilation; a Parr calorimeter and an Emerson bomb; calorimeters for the determination of the value of fuels; indicators, reducing motions and planimeters for indicator tests of engines; hydrometers for determinations of specific gravity of liquids; micrometers and extensometers for fine measurements; gauges and manometers for pressures; a Westinghouse Air Brake outfit;



a six by nine Sturtevant engine for indicator work; a Rumsey hydraulic ram; a twenty inch centrifugal pump; a three by two by three and one-half duplex steam pump; a four by two by six Cameron pump; a five by three by eight Davidson pump; an eight horse power gas engine; a Wheeler surface condenser, capacity 2,500 pounds of steam per hour. The University power plant and heating system, consisting of four boilers of 600 horse power capacity, a 225 horse power Murry corliss engine, a 125 horse power Chuse engine, a Leyner air compressor, capacity, 200 cubic feet per minute; a 50 horse power Harrisburg engine, several blowers and pumps furnish opportunities close at hand for efficiency tests of boilers with different fuels and of the engines at varying loads.

#### WORKSHOP EQUIPMENT.

The forge room occupies a space forty by forty feet. The forge equipment consists of the latest type of Buffalo down-draft forges, each with anvil, providing accommodations for twenty students at each session, and also accessory tools for forging, welding and tool dressing.

The foundry occupies a room forty by forty feet, and contains a Newton cupola furnace, capable of melting two tons of iron per hour, ladles, flasks and all necessary small tools and a stock of patterns.

The forges and cupola are served by three centrifugal fans, which are operated by a ten horse power electric motor.

The machine shop occupies a room forty by eighty feet, and is equipped with iron workers' benches; a large Davis & Eagan planer; a Cincinnati milling machine No 1½; a power hack saw; a Read speed lathe; a Barnes drill press; a Barnes wet emery grinder; a grindstone; a fourteen inch Lodge & Shapley engine lathe; a fourteen inch Putnam engine lathe; an eighteen inch Davis & Eagan engine lathe; an eighteen inch Putnam engine lathe; and an eighteen inch Le Blond engine lathe. In one end of the shop is a large tool room, containing a good assortment of small tools and instruments of precision.

The wood shops occupy two rooms on the first floor, each forty by forty feet; each shop has its own tool room, and is well equipped with benches and speed lathes for fitting and turning work.

#### GENERAL ENGINEERING DRAWING.

A large well-lighted room, forty by eighty feet in the Engineering Shops is equipped for courses in Drawing and Descriptive Geometry. It is provided with convenient desks and drawers. The apparatus for instruction and practice consists of over one hundred models, two fold-



ing plane frames of special design, a pantograph, a universal drafting machine and numerous special drawing instruments. Besides the usual apparatus of frames, bath, and dark room for sun blue printing, the department has an electric blue printing machine. This machine is of the vertical cylinder type with clock mechanism for lowering the lamp in the cylinder. Its capacity is two prints, size forty-two by forty-four inches, at one exposure. A very serviceable appliance for cutting paper and cloth from rolls consists of a specially designed table. It is provided with rectilinear graduations, and a box at one end for inclosing the roll when the piece to be used has been cut off.

# ENGINEERING COURSES

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## CIVIL ENGINEERING

The work in this department is designed to furnish a thorough course of theoretical instruction, accompanied by practice in the various lines of Civil Engineering. While the course is made practical by giving the student a large amount of practice in the field, the drafting and computing room, and the laboratory, the main object is the development of the mental faculties and judgment of the student.

The general studies and surveying of the first two years lead up to courses in theoretical and applied mechanics, railroads, roads and pavements, graphic statics and engines in the junior year, followed in the senior year by courses in bridge design, design of mill buildings and bins, hydraulics, water supply, sewers, masonry construction, tunneling and irrigation engineering.

Besides instruction in strictly engineering subjects, courses are given in language, economics, rhetoric, geology, bacteriology, astronomy, and the law of contracts.

Special stress is placed on the field and laboratory work as an aid to the thorough understanding of the theoretical courses. The thesis in the senior year is intended to give the student an opportunity to work out a problem on his own resources and to teach him to be self-reliant.

Numerous inspection trips are made during the junior and senior years, to give the students an opportunity to get in touch with the practical side of engineering work.

## ELECTRICAL ENGINEERING

It is the aim of the department of Electrical Engineering to provide thorough theoretical and practical training for those desirous of engaging in the various applications of electricity to the arts.

Electrical engineering work proper begins in the junior year with courses in electricity and magnetism, theory and method of electrical measurements with direct applications to the theory, design and operation of continuous current apparatus. The theoretical work in alternating currents is begun in the second semester of this year.

The senior year is largely devoted to a study of the design and operation of alternating current apparatus, such as generators, transformers, synchronous and induction motors, rotary converters and transformers; distribution and transmission, electric traction and power plant construction and operation, lighting and metering; the telephone and telegraph, and other applications of electricity to the arts.

Opportunity is afforded for special work in electro-chemistry, and the design of apparatus is studied by lectures and solution of problems in the drawing room.

Particular attention is given throughout to the proper correlation of class-room study to laboratory work; to this end courses are given in the testing and handling of the various types of direct and alternating current machinery.

In connection with the work in lighting and illumination, complete tests are made of the various types of electric lamps.

Frequent inspection trips are made to the numerous large power plants in the vicinity, and every opportunity is taken to acquaint the student with the engineering problems of his profession. A senior thesis required for graduation, proves most valuable in developing the students' originality.

## MECHANICAL ENGINEERING

This course is intended to train students along the broad lines of Mechanical Engineering.

In the second year the students are given practical instruction in elementary studies of the kinematics of machinery and of machine design.

In the junior and senior years, the course becomes more strongly differentiated from other engineering courses, and assumes its professional aspect. It includes the theory of machine design, valvegear movements, applied mechanics of both building structures and moving machinery; thermodynamics, including the study of steam, gasoline and refrigeration engines; the theory of direct current electricity, and practical instruction in designing specific machines and power plants; shop-

work; thorough instruction in the electrical and mechanical laboratories, in efficiency tests of engines, boilers, motors, blowers, pumps, calorimeters, injectors, etc., as well as general tests of boiler feed waters, lubricating oils, cements, flue gases, steam, fuels, steel and iron. Students will also be given instruction in conducting practical duty trials of power plants. The University heating plant is available for this at all times. In the second semester of the senior year, each student is expected to devote considerable time to research in preparing a graduation thesis on some original subject.

### CHEMICAL ENGINEERING

The great development in the United States during the last decade, of chemical and metallurgical industries, such as the manufacture of alkalies, fertilizers, beet sugar, Portland cement, by-products from coal and petroleum, acids from sulphide ores, plate glass, pottery, etc., where a combined knowledge of mechanical engineering and chemistry is needed for competent supervision, has suggested the inauguration of the above course. Students taking this course pursue the same studies as mechanical engineers for the first two years; in the junior and senior years, they are given special instruction in designing chemical machinery and in chemical analysis of fuels, gases, steel and iron, electro-metallurgy, etc. Where students intend to qualify for certain industries, as for instance, the manufacture of beet sugar or Portland cement, they are encouraged in specializing along such lines.

# REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING

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## CIVIL ENGINEERING

### FRESHMAN YEAR

#### FIRST SEMESTER

|              |                |   |
|--------------|----------------|---|
| ALGEBRA      | (Eng. Math. 1) | 3 |
| TRIGONOMETRY | (Eng. Math. 2) | 2 |
| CHEMISTRY    | (Chem. 1)      | 3 |
| GERMAN       | (Eng. Lang. 3) |   |
| FRENCH       | (Eng. Lang. 5) |   |
| OR SPANISH   | (Eng. Lang. 7) | 3 |
| RHETORIC     | (Eng. Lang. 1) | 2 |
| DRAWING      | (Draw. 1)      | 3 |

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#### SECOND SEMESTER

|                 |                |   |
|-----------------|----------------|---|
| ANAL. GEOMETRY  |                |   |
|                 | Eng. Math. 3)  | 5 |
| CHEMISTRY       | (Chem. 1)      | 3 |
| GERMAN          | (Eng. Lang. 4) |   |
| FRENCH          | (Eng. Lang. 6) |   |
| OR SPANISH      | (Eng. Lang. 8) | 3 |
| RHETORIC        | (Eng. Lang. 2) | 2 |
| DESCRIPT. GEOM. |                |   |
|                 | (Draw. 3)      | 3 |
| DRAWING         | (Draw. 2)      | 2 |

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18

### SOPHOMORE YEAR

#### FIRST SEMESTER

|                |                 |   |
|----------------|-----------------|---|
| DIFF. CALCULUS |                 |   |
|                | (Eng. Math. 4)  | 5 |
| PHYSICS        | (Phys. 1 and 3) | 5 |
| QUAL. ANALYSIS |                 |   |
|                | (Chem. 3 and 4) | 4 |
| SURVEYING      | (C. E. 1)       | 4 |

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18

#### SECOND SEMESTER

|                       |                 |   |
|-----------------------|-----------------|---|
| INT. CALCULUS         | (Eng. Math. 5)  | 5 |
| PHYSICS               | (Phys. 2 and 4) | 5 |
| TECHNICAL MECH.       | (C. E. 5a)      | 2 |
| TOP. SURVEYING        | (C. E. 2)       | 4 |
| R. R. CURVES          | (C. E. 3)       | 1 |
| ENGINEERING MATERIALS |                 |   |
|                       | (C. E. 18)      | 1 |

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18

## JUNIOR YEAR

| FIRST SEMESTER      |             |   | SECOND SEMESTER       |                |    |
|---------------------|-------------|---|-----------------------|----------------|----|
| TECHNICAL MECH.     | (C. E. 5b)  | 3 | HYDRAULICS            | (C. E. 7)      | 2  |
| APPLIED MECH.       | (C. E. 6)   | 3 | HYDRAULIC LAB.        | (C. E. 21)     | 1  |
| ECONOMICS           | (Econ. 1)   | 2 | APP. MECH. LAB.       | (C. E. 22)     | 1  |
| GEOLOGY             | (Geol. 5)   | 3 | LEAST SQUARES         |                |    |
| RAILROADS           | (C. E. 4)   | 5 |                       | (Eng. Math. 6) | 2  |
| BACTERIOLOGY        | (C. E. 13a) | 1 | STEAM ENGINES         | (M. E. 4)      | 2  |
| ROADS AND PAVEMENTS |             |   | GEOLOGY               | (Geol. 6)      | 3  |
|                     | (C. E. 11)  | 1 | ALGEBRAIC AND GRAPHIC |                |    |
|                     | —           |   | STAT.                 | (C. E. 9)      | 3  |
|                     | 18          |   | STRUCTURAL DETAILS    |                |    |
|                     |             |   |                       | (C.E. 30)      | 2  |
|                     |             |   | ASTRONOMY             | (Phys. 5)      | 2  |
|                     |             |   | —                     |                |    |
|                     |             |   |                       |                | 18 |

## SENIOR YEAR

| FIRST SEMESTER     |            |   | SECOND SEMESTER     |            |   |
|--------------------|------------|---|---------------------|------------|---|
| BRIDGE ANALYSIS    | (C.E. 10)  | 4 | BRIDGE DESIGN       | (C. E. 31) | 4 |
| STEEL MILL BLDGS.  | (C. E. 12) | 2 | LAW OF CONTRACTS    |            | 2 |
| WATER SUPPLY       | (C. E. 13) | 3 | REINFORCED CONCRETE |            |   |
| INDUS. ELECTRICITY | (E. E. 9)  | 2 | CONSTRUCTION        | (C. E. 19) | 2 |
| MASONRY CONST.     | (C. E. 8)  | 5 | SEWERS              | (C. E. 14) | 2 |
| WATER POWER        |            |   | TUNNELING           | (C. E. 16) | 1 |
| ENGINEERING        | (C. E. 32) | 2 | C. E. SEMINAR       | (C. E. 17) | 1 |
|                    | —          |   | IRRIGATION ENG.     | (C. E. 15) | 1 |
|                    | 18         |   | THESIS              |            | 3 |
|                    |            |   | —                   |            |   |



## ELECTRICAL ENGINEERING

## FRESHMAN YEAR

## FIRST SEMESTER

|              |                |   |
|--------------|----------------|---|
| ALGEBRA      | (Eng. Math. 1) | 3 |
| TRIGONOMETRY | (Eng. Math. 2) | 2 |
| CHEMISTRY    | (Chem. 1)      | 3 |
| GERMAN       | (Eng. Lang. 3) |   |
| FRENCH       | (Eng. Lang. 5) |   |
| OR SPANISH   | (Eng. Lang. 7) | 3 |
| RHETORIC     | (Eng. Lang. 1) | 2 |
| DRAWING      | (Draw. 1)      | 3 |

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16

## SECOND SEMESTER

|                 |                |   |
|-----------------|----------------|---|
| ANAL. GEOMETRY  | (Eng. Math. 3) | 5 |
| CHEMISTRY       | (Chem. 1)      | 3 |
| GERMAN          | (Eng. Lang. 4) |   |
| FRENCH          | (Eng. Lang. 6) |   |
| OR SPANISH      | (Eng. Lang. 8) | 3 |
| RHETORIC        | (Eng. Lang. 2) | 2 |
| DESCRIPT. GEOM. | (Draw. 3)      | 3 |
| WOODWORKING     | (Shop 1)       | 2 |

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18

## SOPHOMORE YEAR

## FIRST SEMESTER

|                     |                 |   |
|---------------------|-----------------|---|
| DIFF. CALCULUS      | (Eng. Math. 4)  | 5 |
| PHYSICS             | (Phys. 1 and 3) | 5 |
| QUAL. ANALYSIS      | (Chem. 3)       | 2 |
| FORGING             | (Shop 3)        | 2 |
| PATTERN AND FOUNDRY | (Shop 4)        | 2 |
| KINEMATICS          | (M. E. 1)       | 2 |

## SECOND SEMESTER

|                       |                 |   |
|-----------------------|-----------------|---|
| INT. CALCULUS         | (Eng. Math. 5)  | 5 |
| PHYSICS               | (Phys. 2 and 4) | 5 |
| QUAL. ANALYSIS        | (Chem. 4)       | 2 |
| MACHINE SHOP          | (Shop 6)        | 2 |
| MACH. DRAWING         | (M. E. 30)      | 3 |
| ENGINEERING MATERIALS | (C. E. 18)      | 1 |

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18

## JUNIOR YEAR

| FIRST SEMESTER        |            |   | SECOND SEMESTER    |            |    |
|-----------------------|------------|---|--------------------|------------|----|
| MECHANICS             | (Phys. 6)  | 5 | APPLIED MECH.      | (C. E. 6)  | 3  |
| ECONOMICS             | (Econ. 2)  | 2 | APP. MECH. LAB.    | (C. E. 22) | 1  |
| BOILERS               | (M. E. 2)  | 2 | ELECTRO-CHEM.      | (Chem. 17) | 2  |
| DYN. ELEC. MACH.      | (E. E. 1)  | 2 | STEAM ENGINES      | (M. E. 3)  | 3  |
| THEORY ELEC. AND MAG. |            |   | DYN. ELEC. MACH.   | (E. E. 2)  | 3  |
|                       | (Phys. 7)  | 4 | ELEC. LIGHTING     | (E. E. 8)  | 1½ |
| ELEC. MEAS.           | (Phys. 8)  | 1 | ELEC. DISTRIBUTION |            |    |
| MACH. DESIGN          | (M. E. 31) | 2 |                    | (E. E. 6)  | 1½ |
|                       | —          |   | D. C. LAB.         | (E. E. 21) | 2  |
|                       | 18         |   | ELEC. MEAS.        | (Phys. 9)  | 1  |
|                       |            |   |                    |            | —  |
|                       |            |   |                    |            | 18 |

## SENIOR YEAR

| FIRST SEMESTER           |            |   | SECOND SEMESTER     |            |    |
|--------------------------|------------|---|---------------------|------------|----|
| THERMODYNAMICS           | (M. E. 5)  | 2 | POWER PLANTS        | (M. E. 6)  | 2  |
| THEORY OF ALT. CURRENTS  |            |   | A. C. MACH.         | (E. E. 4)  | 3  |
|                          | (E. E. 3)  | 4 | LAW OF CONTRACTS    |            | 2  |
| A. C. LAB.               | (E. E. 22) | 3 | PRIM. AND SEC. BAT. | (E. E. 11) | 1  |
| HYDRAULICS               | (C. E. 7)  | 2 | ELEC. TRAC.         | (E. E. 7)  | 2  |
| TELEPHONY AND TELEGRAPHY |            |   | PHOTOMETRY          | (E. E. 23) | 1  |
|                          | (E. E. 5)  | 2 | E. E. DESIGN        | (E. E. 32) | 2  |
| E. E. DESIGN             | (E. E. 31) | 2 | THESIS              |            | 3  |
| STEAM ENG. LAB.          | (M. E. 22) | 2 |                     |            | —  |
| E. E. SEMINAR            | (E. E. 12) | 1 |                     |            | 16 |
|                          |            |   |                     |            | —  |
|                          |            |   |                     |            | 18 |

## MECHANICAL ENGINEERING

## FRESHMAN YEAR

## FIRST SEMESTER

|              |                |   |
|--------------|----------------|---|
| ALGEBRA      | (Eng. Math. 1) | 3 |
| TRIGONOMETRY | (Eng. Math. 2) | 2 |
| CHEMISTRY    | (Chem. 1)      | 3 |
| GERMAN       | (Eng. Lang. 3) |   |
| FRENCH       | (Eng. Lang. 5) |   |
| OR SPANISH   | (Eng. Lang. 7) | 3 |
| RHETORIC     | (Eng. Lang. 1) | 2 |
| DRAWING      | (Draw. 1)      | 3 |

## SECOND SEMESTER

|                 |                |            |
|-----------------|----------------|------------|
| ANAL. GEOMETRY  |                |            |
|                 | (Eng. Math. 3) | 5          |
| CHEMISTRY       | (Chem. 1)      | 3          |
| GERMAN          | (Eng. Lang. 4) |            |
| FRENCH          | (Eng. Lang. 6) |            |
| OR SPANISH      | (Eng. Lang. 8) | 3          |
| RHETORIC        | (Eng. Lang. 2) | 2          |
| DESCRIPT. GEOM. |                |            |
|                 | (Draw. 3)      | 3          |
| 16              | WOODWORKING    | (Shop 1) 2 |

18

## SOPHOMORE YEAR

## FIRST SEMESTER

|                |                 |   |
|----------------|-----------------|---|
| DIFF. CALCULUS |                 |   |
|                | (Eng. Math. 4)  | 5 |
| PHYSICS        | (Phys. 1 and 3) | 5 |
| QUAL. ANALYSIS | (Chem. 3)       | 2 |
| PATTERN MAKING | (Shop 2)        | 2 |
| FORGING        | (Shop 3)        | 2 |
| KINEMATICS     | (M. E. 1)       | 2 |

## SECOND SEMESTER

|                 |                       |              |
|-----------------|-----------------------|--------------|
| INT. CALCULUS   |                       |              |
|                 | (Eng. Math. 5)        | 5            |
| PHYSICS         | (Phys. 2 and 4)       | 5            |
| QUAL. ANALYSIS  | (Chem. 4)             | 2            |
| FOUNDRY         | (Shop 5)              | 2            |
| MACH. DRAWING   | (M. E. 30)            | 1            |
| TECHNICAL MECH. | (C. E. 5a)            | 2            |
| —               | ENGINEERING MATERIALS |              |
| 18              |                       | (C. E. 18) 1 |

18

## JUNIOR YEAR

| FIRST SEMESTER    |                |    | SECOND SEMESTER  |            |    |
|-------------------|----------------|----|------------------|------------|----|
| TECHNICAL MECH.   | (C. E. 5b)     | 3  | HYDRAULICS       | (C. E. 7)  | 2  |
| APPLIED MECHANICS | (C. E. 6)      | 3  | APP. MECH. LAB.  | (C. E. 22) | 1  |
| BOILERS           | (M. E. 2)      | 2  | STEAM ENGINES    | (M. E. 3)  | 3  |
| DYN. ELEC. MACH.  | (E. E. 1)      | 2  | ELECTRICAL MACH. | (E. E. 10) | 2  |
| MACH. DESIGN      | (M. E. 31)     | 3  | E. E. LAB.       | (E. E. 24) | 2  |
| ECONOMICS         | (Econ. 1)      | 2  | MACH. DESIGN     | (M. E. 32) | 5  |
| MACHINE SHOP      |                |    | MECH. LAB.       | (M. E. 21) | 1  |
|                   | (Shop 6 and 7) | 3  | HEAT AND VENT.   | (M. E. 8)  | 2  |
|                   |                | —  |                  |            | —  |
|                   |                | 18 |                  |            | 18 |

## SENIOR YEAR

| FIRST SEMESTER         |            |    | SECOND SEMESTER           |            |    |
|------------------------|------------|----|---------------------------|------------|----|
| THERMODYNAMICS         | (M. E. 5)  | 2  | STEAM TURBINES            | (M. E. 7)  | 2  |
| STEAM ENG. DESIGN      | (M. E. 33) | 4  | LAW OF CONTRACTS          |            | 2  |
| GAS ENGINES            | (M. E. 13) | 1  | POWER PLANTS              | (M. E. 6)  | 2  |
| STEAM ENG. LAB.        | (M. E. 22) | 2  | POWER PLANT DESIGN        |            |    |
| HYDRAULIC MACH.        | (M. E. 9)  | 2  |                           | (M. E. 34) | 2  |
| SURVEYING              | (C. E. 1)  | 3  | M. E. LAB.                | (M. E. 23) | 2  |
| SHOP ECONOMICS         | (M. E. 11) | 2  | RAILWAY MECH. ENGINEERING |            |    |
| STRUCTURAL ENGINEERING |            |    |                           | (M. E. 10) | 2  |
|                        | (C. E. 33) | 2  | COMPRESSED AIR            | (M. E. 12) | 1  |
|                        |            | —  | THESIS                    |            | 3  |
|                        |            | 18 |                           |            | —  |
|                        |            |    |                           |            | 16 |

## CHEMICAL ENGINEERING

## FRESHMAN YEAR

## FIRST SEMESTER

## SECOND SEMESTER

|              |                |    |                 |                |    |
|--------------|----------------|----|-----------------|----------------|----|
| ALGEBRA      | (Eng. Math. 1) | 3  | ANAL. GEOMETRY  |                |    |
| TRIGONOMETRY | (Eng. Math. 2) | 2  |                 | (Eng. Math. 3) | 5  |
| CHEMISTRY    | (Chem. 1)      | 3  | CHEMISTRY       | (Chem. 1)      | 3  |
| GERMAN       | (Eng. Lang. 3) |    | GERMAN          | (Eng. Lang. 4) |    |
| FRENCH       | (Eng. Lang. 5) |    | FRENCH          | (Eng. Lang. 6) |    |
| OR SPANISH   | (Eng. Lang. 7) | 3  | OR SPANISH      | (Eng. Lang. 8) | 3  |
| RHETORIC     | (Eng. Lang. 1) | 2  | RHETORIC        | (Eng. Lang. 2) | 2  |
| DRAWING      | (Draw. 1)      | 3  | DESCRIPT. GEOM. |                |    |
|              |                | —  |                 | (Draw. 3)      | 3  |
|              |                | 16 | WOODWORKING     | (Shop 1)       | 2  |
|              |                |    |                 | —              |    |
|              |                |    |                 |                | 18 |

## SOPHOMORE YEAR

## FIRST SEMESTER

## SECOND SEMESTER

|                |                 |    |                 |                 |    |
|----------------|-----------------|----|-----------------|-----------------|----|
| DIFF. CALCULUS |                 |    | INT. CALCULUS   | (Eng. Math. 5)  | 5  |
|                | (Eng. Math. 4)  | 5  | PHYSICS         | (Phys. 2 and 4) | 5  |
| PHYSICS        | (Phys. 1 and 3) | 5  | QUANT. ANALYSIS |                 |    |
| FORGING        | (Shop 3)        | 2  |                 | (Chem. 5 and 6) | 8  |
| QUAL. ANALYSIS |                 |    |                 | —               |    |
|                | (Chem. 3 and 4) | 4  |                 |                 | 18 |
| KINEMATICS     | (M. E. 1)       | 2  |                 |                 |    |
|                |                 | —  |                 |                 |    |
|                |                 | 18 |                 |                 |    |

## JUNIOR YEAR

| FIRST SEMESTER          |            |    | SECOND SEMESTER       |            |    |
|-------------------------|------------|----|-----------------------|------------|----|
| MECHANICS               | (Phys. 6)  | 5  | APP. MECH.            | (C. E. 6)  | 3  |
| BOILERS                 | (M. E. 2)  | 2  | APP. MECH. LAB.       | (C. E. 22) | 1  |
| MACH. DESIGN            | (M. E. 31) | 2  | STEAM ENGINES         | (M. E. 3)  | 3  |
| ORGANIC CHEMISTRY LECT. |            |    | MACH. DESIGN          | (M. E. 32) | 4  |
|                         | (Chem. 12) | 4  | MECH. LAB., INCLUDING |            |    |
| PHYS. CHEM. LECT.       | (Chem. 15) | 3  | GAS ANALYSIS          | (M. E. 21) | 2  |
| MACHINE SHOP            | (Shop 6)   | 2  | ORGANIC PREPARATIONS  |            |    |
|                         |            | —  |                       | (Chem. 13) | 3  |
|                         |            | 18 | ELECTRO-CHEM. LECT.   |            |    |
|                         |            |    |                       | (Chem. 17) | 2  |
|                         |            |    |                       | —          |    |
|                         |            |    |                       |            | 18 |

## SENIOR YEAR

| FIRST SEMESTER        |            |    | SECOND SEMESTER      |            |    |
|-----------------------|------------|----|----------------------|------------|----|
| THERMODYNAMICS        | (M. E. 5)  | 2  | STEAM TURBINES       | (M. E. 7)  | 2  |
| STEAM ENG. DESIGN     | (M. E. 33) | 2  | ELECTRICAL MACH.     | (E. E. 10) | 2  |
| STEAM ENG. LAB.       | (M. E. 22) | 2  | E. E. LAB.           | (E. E. 24) | 2  |
| PHYSICAL AND ELECTRO- |            |    | M. E. LAB.           | (M. E. 23) | 1  |
| CHEM. LAB.            | (Chem. 16) | 2  | TECH. CHEM. ANALYSIS |            |    |
| ECONOMIC GEOLOGY      | (Geol. 5)  | 3  |                      | (Chem. 10) | 3  |
| DYN. ELEC. MACH.      | (E. E. 1)  | 2  | GEOL. MATERIALS      | (Geol. 11) | 3  |
| SHOP ECONOMICS        | (M. E. 11) | 2  | THESIS               |            | 3  |
| HYDRAULICS            | (C. E. 7)  | 2  |                      |            | —  |
| GAS ENGINES           | (M. E. 13) | 1  |                      |            | 16 |
|                       |            | —  |                      |            |    |
|                       |            | 18 |                      |            |    |



# DESCRIPTION OF COURSES OF STUDY

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## CIVIL ENGINEERING

### 1. SURVEYING. *First semester.* 4 h.

Instruction is given in the theory of surveying and in the theory, use, and adjustment of the compass, level, transit, plane table and sextant. The field work includes pacing and chaining surveys; compass and transit traverses; measurement of angles by repetition; differential, profile, and contour leveling; traverses with the plane-table, etc. Maps and reports are required.

Considerable time is given to a study of U. S. Land Survey methods, and to court decisions relating to relocation of corners, lines and boundaries.

Text-books: Pence and Ketchum's Surveying Manual; Allen's Field and Office Tables.

Prerequisites: Eng. Math. 1 and 2, and Drawing 1.

### 2. TOPOGRAPHIC SURVEYING. *Second semester.* 4 h.

In this course the theory and use of the stadia, the aneroid barometer, base line apparatus, and other instruments used in topographic surveys are studied, and the different methods of making topographic surveys are discussed. A complete topographic survey based on a carefully designed triangulation system is made; the angles are measured by repetition, and base lines are measured with precision. The calculations are made and a map is drawn. A survey is made of a city block, and complete surveys are made of a city street and a mining claim. Considerable time is devoted to topographic drawing.

Text-books: Pence and Ketchum's Surveying Manual; Wilson's Topographic Surveying; and Notes by the Department.

Prerequisite: C. E. 1.

3. RAILROAD CURVES. *Second semester.* 1 h.

A study is made of simple and compound curves. Instruction consists of recitations, problems, and field locations.

Text-book: Allen's Railroad Curves and Earthwork.

Prerequisites: C. E. 1, and to be taken with C. E. 2.

4. RAILROAD ENGINEERING. *First semester.* 5 h.

Instruction in Railroad Engineering consists of field practice, office and class-room work.

Field practice consists of the complete location of a line of railroad, including reconnaissance, preliminary, paper location, final location, and cross-sectioning.

In the office the quantities are calculated and profiles and a complete map are drawn.

In the class-room a detailed study is made of the principles of economic location and construction, maintainance of way, and railway structures and appliances.

Text-books: Webb's Economics of Railroad Construction; Camp's Notes on Track; Talbot's Railway Transition Spiral.

Prerequisites: C. E. 1, 2, and 3.

5a. TECHNICAL MECHANICS. *Second semester.* 2 h.

The mechanics of engineering rather than of astronomy is here considered. Particular attention is given to developing and fixing fundamental concepts of equilibrium and motion as applied to engineering problems. Both algebraic and graphic methods of the calculation of problems are considered. This course is followed in the first semester of the junior year by Technical Mechanics 5b.

Text-book: Maurer's Technical Mechanics.

Prerequisites: Eng. Math. 4, and registration in Eng. Math. 5.

5b. TECHNICAL MECHANICS. *First semester.* 3 h.

A continuation of C. E. 5a.

Text-book: Maurer's Technical Mechanics.

Prerequisites: Eng. Math. 5, and C. E. 5a.

6. APPLIED MECHANICS. *First and second semesters.* 3 h.

Recitations, problems, and lectures.

The following subjects are taken up: elasticity of materials; stress and strain; working stresses; resistance of pipes and riveted

joints; bending moment; resisting moment; shear; elastic curve of beams; torsion; internal stress; fatigue of metals, etc. Some time is given to the quality and requirements of engineering materials.

Text-book: Merriman's *Mechanics of Materials*.

Prerequisites: Eng. Math. 4 and 5, and Physics 6 or C. E. 5.

7. **HYDRAULICS.** *First and second semesters.* 2 h.

Recitations, problems, and lectures.

The following subjects are taken up: weight and pressure of water; head; center of pressure; velocity and discharge through orifices, tubes, nozzles, pipes, hose, weirs, conduits, canals, rivers; meters and measurements; motors, turbines, and water wheels; water power.

Text-book: Merriman's *Hydraulics*.

Prerequisites: Eng. Math. 4 and 5, and Physics 6, or C. E. 5 and 6.

8. **MASONRY CONSTRUCTION.** *First semester.* 5 h.

A study of cements, concrete, retaining walls, dams, arches, and other masonry and reinforced concrete structures. A complete investigation of a reinforced concrete arch is made, using the elastic theory. Some time is given to testing cements, brick, stone, and reinforced concrete.

Text-book: Baker's *Masonry Construction*.

Prerequisites: C. E. 5 and 6.

9. **ALGEBRAIC AND GRAPHIC STATICS.** *Second semester.* 3 h.

The elements of statics by algebraic and graphic methods, and stresses in simple roof trusses and bridges.

Text-book: Ketchum's *Steel Mill Buildings*.

Prerequisites: C. E. 5 and 6.

10. **BRIDGE ANALYSIS.** *First semester.* 4 h.

This course includes the calculations of stresses in bridges and girders loaded with uniform and concentrated loads, by algebraic and graphic methods; stresses in portals, pins, and other details preliminary to bridge design. Each student calculates the weight and investigates the efficiencies of the members of a highway bridge.

Text-book: Ketchum's Design of Highway Bridges.

Prerequisites: C. E. 9 and 30.

11. ROADS AND PAVEMENTS. *First semester (first half)*. 1 h.

A detailed study of country roads and city pavements, together with a study of road building materials.

Text-book: Baker's Roads and Pavements.

Prerequisites: C. E. 1, 2, 3, and 5a.

12. STEEL MILL BUILDINGS. *First semester*. 2 h.

A study of steel mill buildings, mine structures, grain elevators, ore bins, retaining walls, etc.

Text-books: Ketchum's Steel Mill Buildings; Ketchum's Walls, Bins, and Grain Elevators.

Prerequisites: C. E. 9 and 30, and to be taken with C. E. 10.

13. WATER SUPPLY. *First semester*. 3 h.

The principle features of water works design and construction, including quantity and quality of potable water; choice of supply: the designing of distribution systems, reservoirs, dams and elevated tanks.

Text-book: Turneure and Russell's Public Water Supplies.

Prerequisites: C. E. 7 and 13a.

13a. BACTERIOLOGY. *First semester (second half)*. 1 h.

Lectures and laboratory.

Bacteriological methods and their application in water analysis and sewerage.

Prerequisites: Chemistry 1 and 2, and Physics 1 to 4.

14. SEWERS. *Second semester*. 2 h.

The design and construction of sewerage systems, including separate and combined systems; surveys and plans; determination of size and capacity; construction; and modern methods of sewage disposal.

Text-book: Folwell's Sewerage and Notes.

Prerequisites: C. E. 7 and 13.

15. IRRIGATION ENGINEERING. *Second semester*. 1 h.

In this course a study is made of the fundamental principles of irrigation engineering, including the design and construction of reservoirs, dams, flumes, canals, and other irrigation works.

Some time is given to water power development.

Text-book: Wilson's Irrigation Engineering.

Prerequisites: C. E. 7, 8, and 13.

16. TUNNELING. *Second semester. 1 h.*

This course includes a study of methods of rock and earth excavations, tunneling, and of explosives.

Text-book: Prelini's Tunneling.

Prerequisites: C. E. 4, 5, and 6.

17. C. E. SEMINAR. *Second semester. 1 h.*

A study is made of technical periodicals and literature.

Prerequisites: C. E. 8, 10, and 13.

18. ENGINEERING MATERIALS. *Second semester. 1 h.*

A study is made of the properties and requirements for materials used in engineering construction, the effect of different methods of manufacture upon the quality of the material, and specifications and standard tests for materials.

Prerequisites: Eng. Math. 3 and Physics 1.

19. REINFORCED CONCRETE STRUCTURES. *Second semester. 2 h.*

A study is made of the theory of reinforced concrete, and the design of reinforced concrete structures.

Text-books: Turneaure and Maurer's Reinforced Concrete; Ketchum's Walls, Bins, and Grain Elevators, and references.

Prerequisites: C. E. 10 and 12.

21. HYDRAULIC LABORATORY. *Second semester. 1 h.*

Experiments on flow of water over weirs, through orifices in open channels and pipes; test of pumps; reaction and turbine water wheels, etc.; determination of coefficients of friction in hose and pipes.

Prerequisites: C. E. 5 and 6, and registration in C. E. 7.

22. APPLIED MECHANICS LABORATORY. *Second semester. 1 h.*

Experiments on strength of steel, wrought and cast iron; shear on rivets; strength of wood; and tensile and compressive strength of Portland cement, brick and building stone.

Prerequisite: To be taken with C. E. 6.

30. STRUCTURAL DETAILS. *Second semester. 2 h.*

The student traces the shop drawings of a highway bridge; detail beams, columns and connections, and calculates the weight of a highway bridge.

Prerequisite: To be taken with C. E. 9.

31. BRIDGE DESIGN. *Second semester. 4 h.*

The detailed design of a railway truss bridge and a railway plate girder, including the making of complete detail drawings and an estimate of weight and cost. A study is made of swing, cantilever, suspension, arch, and movable bridges.

Text-books: Merriman and Jacoby's Bridges, Parts III and IV, and Ketchum's Notes on Bridge Design.

Prerequisite: C. E. 10.

32. WATER POWER ENGINEERING. *First semester. 2 h.*

Stream flow including hydrographs of actual streams; impulse wheels and reaction turbines and the conditions governing their selection; storage and the relation of the reservoir to the power station; economics of power development, its sale and distribution.

Text-book: Mead's Water Power Engineering.

Prerequisites: C. E. 4, 7 and 9, and registration in C. E. 8.

33. STRUCTURAL ENGINEERING. *First semester. 2 h.*

This course includes the elements of statics by algebraic and graphic methods, the calculation of stresses in roof trusses, and the design of shops and mill buildings.

Text-book: Ketchum's Steel Mill Buildings.

Prerequisite: C. E. 6.

For Graduate Courses see page 142 under "Graduate School."

## ELECTRICAL ENGINEERING

1. DYNAMO ELECTRICAL MACHINERY. *First semester. 2 h.*

A study of the theory of electricity and magnetism, and the magnetic properties of iron and steel; the theory, construction and operation of direct current generators and motors.



Text-book: Elements of Electrical Engineering by Franklin and Esty. The work is supplemented by practical problems throughout the course.

Prerequisites: Physics 1 and 2, and Physics 3 and 4.

2. DYNAMO ELECTRICAL MACHINERY. *Second semester.* 3 h.

Continuation of course 1.

3. THEORY OF ALTERNATING CURRENTS. *First semester.* 4 h.

A course in the mathematical theory of alternating currents and alternating phenomena and methods of measurement. Inductance, capacity, impedance, etc.

Text-book: Franklin and Williamson's Alternating Currents.

Prerequisites: E. E. 1 and 2.

4. ALTERNATING CURRENT MACHINERY. *Second semester.* 3 h.

Theory, regulation, testing and operation of various kinds of alternating current apparatus, single and polyphase generators, synchronous and induction motors, rotary converters, etc.

Prerequisite: E. E. 3.

5. TELEPHONY AND TELEGRAPHY. *First semester.* 2 h.

The theory of the telephone; land, submarine and wireless telegraphy; telephone and telegraph instruments and systems, and engineering problems.

Text-book: Miller's American Telephone Practice.

Prerequisites: E. E. 1 and 2.

6. ELECTRICAL DISTRIBUTION. *Second semester (last nine weeks).*

1½ h.

Lectures and problems.

A study of the principles of direct and alternating current distribution for light and power purposes; methods of regulation and installation, illustrated by practical application to specific problems. Applications to alternating current problems are chiefly in the second semester in electrical transmission course.

Prerequisites: E. E. 1 and to be taken with E. E. 2.

7. ELECTRIC TRACTION. *Second semester.* 2 h.

Principles of the design and installation of electric railway systems, storage battery installations, distribution systems; surface,

overhead, underground railways, applications to direct and alternating current systems.

Prerequisites: E. E. 1, 2 and 3.

8. ELECTRIC LIGHTING. *Second semester (first nine weeks).* 1½ h.

Principles of illumination; manufacture, operation, tests of arc, incandescent, Nernst lamps; integrating meters—theory and performance of the same.

Prerequisites: E. E. 1 and to be taken with E. E. 2.

9. INDUSTRIAL ELECTRICITY. *First semester.* 2 h.

A brief course designed especially for students in other departments to acquaint them with the general principles and applications of electricity and electrical machinery.

Prerequisites: Physics 1 and 2, and 3 and 4.

10. ELECTRICAL MACHINERY. *Second semester.* 2 h.

A course designed especially for students in Mechanical and Chemical Engineering departments, some attention being given near the end of the course to the simpler principles of alternating currents and alternating current machinery.

Prerequisite: E. E. 1.

11. PRIMARY AND SECONDARY BATTERIES. *Second semester.* 1 h.

A course devoted primarily to the study of storage batteries, their use, maintenance, and care, and their application to central station work and power distribution.

Prerequisites: E. E. 1 and 2.

12. E. E. SEMINAR. *First semester.* 1 h.

A course in the history of Electrical Engineering and the biography of prominent engineers; also reviews of current electrical literature.

Prerequisites: E. E. 1 and 2.

21. DIRECT CURRENT LABORATORY. *Second semester.* 2 h.

Experimental study of the characteristics of direct current generators and motors; methods of testing, commercial tests, etc.

Prerequisites: E. E. 1, and to be taken with E. E. 2.

22. ALTERNATING CURRENT LABORATORY. *First semester.* 3 h.

Experimental study of the properties and performance of alternating current generators, motors, transformers, rotary converters; methods of alternating current measurements and commercial tests.

Prerequisite: To be taken with E. E. 3.

23. PHOTOMETRY. *Second semester.* 1 h.

A course in the photometry of the various forms of electric lamps; arc, incandescent, Nernst, etc.; life, efficiency and distribution tests.

24. ELECTRICAL LABORATORY. *Second semester.* 2 h.

A laboratory course in direct and alternating current machinery, testing and operation.

Prerequisites: E. E. 1, to be taken with E. E. 10.

31. ELECTRICAL ENGINEERING DESIGN. *First semester.* 2 h.

Principles of design of direct and alternating current apparatus. Lectures, problems, drawing.

Prerequisites: E. E. 1 and 2.

32. ELECTRICAL ENGINEERING DESIGN. *Second semester.* 2 h.

Continuation of course 31.

Prerequisite: E. E. 3.

For Graduate Courses see page 143 under "Graduate School."

## MECHANICAL ENGINEERING

1. KINEMATICS. *First semester.* 2 h.

A study of the relative motions of the parts of machines, instant centers, velocities, gearing and wrapping connectors.

Prerequisites: Physics 1 and 3.

Text-book: Barr's Kinematics.

2. BOILERS. *First semester.* 2 h.

A study of the general construction as to strength and form; considerable attention is paid to the rules adopted by the different manufacturers as to grate area, heating surface, etc.

Prerequisites: Physics 1 and 2, and 3 and 4.

Text-book: Hutton's Mechanical Engineering of Power Plants.

3. STEAM ENGINES. *Second semester.* 3 h.

Lectures and recitations.

The various types of steam engines are studied. The object of the course is to familiarize the student with the forms and parts of the steam engine preparatory to the study of thermodynamics and its applications. Following this work a theoretic and practical study of valve gears and link motions is taken up. A thorough investigation of the various kinds of valves and link motions occurring in the different types of engines, pumps, and other machinery is a part of the work done under this head.

Text-books: Hutton's Mechanical Engineering of Power Plants; Halsey's Slide Valve Gears.

Prerequisite: M. E. 2.

4. BOILERS AND STEAM ENGINES. *Second semester.* 2 h.

This is a course in boilers and steam engines for civil engineering students.

Text-book: Hutton's Mechanical Engineering of Power Plants.

Prerequisites: C. E. 5 and 6.

5. THERMODYNAMICS. *First semester.* 2 h.

Mechanical theory of heat, laws of transformation, perfect gases, saturated and superheated vapors, various cycles, heat and refrigeration engines.

Text-book: Heck's Steam Engines.

Prerequisites: Physics 1 and 2, and 3 and 4, M. E. 3, Eng. Math. 5, Phys. 6, or C. E. 5.

6. POWER PLANTS. *Second semester.* 2 h.

Lectures, recitations and problems.

The study of the chemical and calorific qualities of coal, coke, petroleum, natural gas, gasoline, and producer gas; the design of various types of boilers, stokers, grates, feed water heaters, purifiers and economizers, condensers, artificial and natural draught, steam and gas engines, and turbines.

Text-book: Hutton's Heat and Heat Engines.

Prerequisites: M. E. 3 and 5.

7. STEAM TURBINES. *Second semester.* 2 h.

A study of the principles of the design, installation and management of steam turbine power plants.

Prerequisites: M. E. 3 and 5.

8. HEATING AND VENTILATION. *Second semester.* 2 h.

A course of lectures is given on this subject in connection with some acceptable text. The different methods of heating and ventilating are investigated with a view to determining their efficiency and economy. The matter of favorable scientific conditions as affected by heating and ventilating is given careful consideration. As a part of the course each student is required to design a system of heating for a given building by some standard method. He also prepares the necessary specifications and contracts and makes out bills of materials.

Text-book: Carpenter's Heating and Ventilating of Buildings.

Prerequisites: M. E. 1, 2, and 3.

9. HYDRAULIC MACHINERY. 2 h.

This course makes application of the principles of the dynamics of fluids to the various turbines and other water wheels in general use. Cranes, hoists, engines and other appliances using water are discussed. The efficiency of water as compared with steam, electricity or air under different conditions, is considered.

Text-books: Blaine's Hydraulic Machinery; Barr's Pumping Machinery.

Prerequisites: C. E. 7, and M. E. 3.

10. RAILWAY MECHANICAL ENGINEERING. *Second semester.* 2 h.

The purpose of this course is to give familiarity with the working parts and details of locomotives and railway equipment. Special attention will be given to types, properties, weight on driver, etc. The management and repair of locomotives will also be considered. Railway signals, air brakes, car heating and lighting will be treated.

Text-book: McShane's Locomotive Up To Date.

Prerequisites: M. E. 3 and 5.

11. SHOP ECONOMICS. *First semester.* 2 h.

This course of lectures will cover matters relating to the economical design and management of manufacturing property; the capi-

talization and organization of companies; the organization of labor; the calculation of cost; transmission of power; and sanitation.

Prerequisites: M. E. 3 and 32.

12. COMPRESSED AIR. *Second semester. 1 h.*

A study of air compressors; the transmission of compressed air and its application to pneumatic machinery.

Text-book: Peele's Compressed Air.

Prerequisite: M. E. 5.

13. GAS ENGINES. *First semester. 1 h.*

The purpose of this course is to acquaint the student with the construction and operation of gas engines and producer gas plants.

Text-book: Hutton's Gas Engines.

Prerequisite: M. E. 5.

21. MECHANICAL LABORATORY. *Second semester. 1 h.*

Experimental work in calibration of planimeters, water meters and gauges; tests of dryness and quality of steam; tests of acidity, specific gravity, chilling and flashing points, and viscosity of oils and other lubricating materials; of impurities in boiler feed water; of flow of air with anemometers and draught gauges, etc.

Text-book: Carpenter's Experimental Engineering is used as a reference.

22. STEAM ENGINE LABORATORY. *First semester. 2 h.*

Tests of boiler flue gases and combustion of fuels; of efficiency of injectors, engines and boilers; commercial tests of heating and power plants.

Prerequisites: M. E. 3 and 5.

23. MECHANICAL LABORATORY. *Second semester. 2 h.*

Advanced work in engine testing involving a study of entropy; tests in heating and ventilating.

30. MACHINE DRAWING. *Second semester. 3 h.*

Drawing from models; tracing; blue printing; lettering; working drawings of machinery for electrical and mechanical engineers.

Prerequisites: M. E. 1, and registration in C. E. 18.



31. MACHINE DESIGN. *First semester.* 3 h.

Lectures and drawing.

A study of the design of machines from the theoretical and practical standpoints; kinematic relation of parts, strength, rigidity and ease, and cheapness of construction.

Prerequisites: M. E. 1, and C. E. 18.

32. MACHINE DESIGN. *Second semester.* 5 h.

A continuation of 31.

Prerequisites: M. E. 31, and C. E. 6.

33. STEAM ENGINE DESIGN. *First semester.* 3 h.

Recitations and problems.

A study of the practical and theoretical design of simple, compound and triple expansion steam engines.

Prerequisites: M. E. 2, 3, and 32.

34. POWER PLANT DESIGN. *Second semester.* 2 h.

This course is a supplement to the course on power plant equipment, and is intended to give students actual experience in computing the requirements of power plants, and making construction drawings for the same.

Prerequisites: M. E. 6 and 33.

For Graduate Courses see page 143 under "Graduate School."

## SHOPWORK

In connection with the shopwork a course of reading is mapped out covering the construction, care and use of the tools and machinery with which the student is working. Written quizzes on this work will be required as near the end of each month as the schedule will permit.

1. WOODWORKING. *Second semester. Two periods per week of three hours each.* 2 h.

The use of all ordinary wood-working tools in a series of graded exercises, including the use of speed lathe and turning tools.

2. PATTERN MAKING. *First semester. 2 h.*

Making patterns for iron and brass castings with allowances for draft and shrinkage and finish.

Prerequisite: Shop 1.

3. FORGING. *First semester. Two periods per week of three hours each. 2 h.*

Occasional lectures and practical work in the forging and welding of iron and steel, tool dressing, tempering, case hardening, and annealing. Each student makes a set of lathe tools and cold chisels to be used later in the machine shop.

4. PATTERN MAKING AND FOUNDRY. *First semester. Two periods per week of three hours each. 2 h.*

This course is for Electrical Engineering students. The time is divided between pattern work and foundry.

Prerequisite: Shop 1.

5. FOUNDRY. *Second semester. 2 h.*

Practical work in the making of moulds and cores; the care and operation of the cupola furnace and the brass furnace; mixing of metals; and the study of the properties of alloys.

6. MACHINE SHOP. *First semester. Two periods per week of three hours each. 2 h.*

Practical work in chipping and filing of iron, steel, brass, and other metals; the working of metals in lathe, planer and drill press; repair of broken machinery and construction of machines and machine parts.

Prerequisites: Shop 1, 2, and 3.

7. MACHINE SHOP. *Second semester. 1 h.*

A continuation of Shop 6.

## GENERAL ENGINEERING DRAWING

1. MECHANICAL DRAWING. *First semester. 3 h.*

Use of instruments; drawing of geometric figures in isometric, cabinet and orthographic projections. Shading is taught for a two-fold object, viz.: effect on the drawing, and preparation for Descriptive Geometry. Considerable attention is given to lettering.

Text-books: Tracey's Mechanical Drawing, and Reinhardt's Lettering.

2. MECHANICAL DRAWING. *Second semester. 2 h.*

A continuation of Mechanical Drawing for first semester. The course is arranged especially for the Civil Engineering students, and includes sketching from models, taking dimensions for scaled drawings, topographic drawings and mapping.

Text-book: Reinhardt's Technic of Mechanical Drawing.

3. DESCRIPTIVE GEOMETRY. *Second semester. 3 h.*

The course covers the orthographic projection of points, lines, planes, warped surfaces, etc., in the four angles of projection. Care is exercised to train the student to handle the figures in space rather than on the drawing, at the same time securing correct execution of the drawing.

Text-book: McCord's Descriptive Geometry.

Prerequisite: Draw. 1.

4. FREE-HAND DRAWING. *First semester. 2 h. Open to students in all departments.*

A course which includes lectures on the principles of free-hand perspective, practice drawing from models and casts, and assigned reading.

## ENGINEERING MATHEMATICS

1. ALGEBRA. *First semester. 3 h.*

On account of the differences in preparation of students entering from widely separated high schools, the course begins with a review of surds and imaginaries, quadratic equations, and logarithms. This review is completed by the time logarithms are needed in trigonometry. After this follows a thorough drill in the algebraic principles that the students will need in analytic geometry, calculus and in the applications to practical engineering. Particular emphasis is placed on graphic methods.

Text-book: Rietz and Crathorne's College Algebra.

2. TRIGONOMETRY. *First semester. 2 h.*

This is in the main a conventional course in trigonometry. Considerable attention is given to graphic methods. A knowledge of logarithms is assumed.

Text-book: Phillips and Strong's Plane and Spherical Trigonometry.

3. ANALYTICAL GEOMETRY. *Second semester. Daily. 5 h.*

The aim is to familiarize the student with analytical methods of investigation. Special emphasis is placed upon the use of algebraic processes as a means of demonstrating geometric properties of loci. In addition to a study of the properties of conics, the transformation of co-ordinates and the general equation of the second degree are taken up. To this are added brief chapters on solid analytic geometry and higher plane curves.

Text-book: Wentworth's Analytic Geometry.

Prerequisites: Eng. Math. 1 and 2.

4. DIFFERENTIAL CALCULUS. *First semester. 5 h.*

After the student becomes able to differentiate a given function with ease and accuracy, applications are taken up to problems in maxima and minima, expansions of functions in series, evaluation of indeterminate forms, radii and centers of curvature and curve tracing.

Text-book: Townsend and Goodenough's Calculus.

Prerequisite: Eng. Math. 3.

5. INTEGRAL CALCULUS. *Second semester. 5 h.*

In this course the standard methods of integration are taken up, together with applications to areas, volumes, rectification of curves, center of mass, moments of inertia, radius of gyration, and many practical engineering problems. A chapter on the elementary methods of integrating ordinary differential equations is included.

Text-book: Townsend and Goodenough's Calculus.

Prerequisite: Eng. Math. 4.

6. LEAST SQUARES. *Second semester. 2 h.*

The following topics are among those treated: theory of probability, probability integral, adjustment of observations, precision of observations, direct observations, functions of observed quantities,

independent and conditioned observations, probable error, mean error, constant errors, solution of normal equations.

Text-book: Merriman's Method of Least Squares.

Prerequisite: Eng. Math. 5.

7. DIFFERENTIAL EQUATIONS. *Second semester.* 3 h.

Text-book: Murray's Introductory Course in Differential Equations.

Prerequisite: Eng. Math. 5.

## LANGUAGES IN COLLEGE OF ENGINEERING

### ENGLISH.

1. ENGINEERING RHETORIC. *First semester.* 2 h.

A course in composition and rhetoric arranged with special reference to the needs of engineering students.

2. ENGINEERING RHETORIC. *Second semester.* 2 h.

This course is a continuation of Eng. Rhet. 1.

Summer reading: In addition to the reading in the above courses students are required to do a prescribed amount of reading during the summer vacations following the Freshman, Sophomore, and Junior years. The required lists of books are printed in a supplementary pamphlet.

### GERMAN.

3. ENGINEERING GERMAN. *First semester.* 3 h.

The course is designed to give a practical, scientific German vocabulary, as well as an ability to read rapidly ordinary scientific material. It will include chemistry, physics, and geology as given in the text-book, with supplementary selections from current engineering magazines.

Text-book: Wait's German Science Reader.

Prerequisite: One year's high-school German.

4. ENGINEERING GERMAN. *Second semester.* 3 h.

A continuation of course 3 covering mineralogy, astronomy, and anatomy as given in the text-book, with supplementary selections from current engineering magazines.

Text-book: Wait's German Science Reader.

Prerequisite: German 3.

FRENCH.

5. ENGINEERING FRENCH. *First semester.* 3 h.

A course in grammar, pronunciation, composition, and sight-reading.

Text-books: Fraser and Squair's French Grammar; Super's French Reader.

6. ENGINEERING FRENCH. *Second semester.* 3 h.

A course in reading scientific French.

Text-books: Bowen's First Scientific French Reader; Herdler's Scientific French Reader; Luquiens' Popular Science.

Prerequisite: French 5.

SPANISH.

7. ENGINEERING SPANISH. *First semester.* 3 h.

A\* course in grammar, pronunciation, composition, and sight-reading.

Text-book: Giese's First Spanish Book and Reader.

8. ENGINEERING SPANISH. *Second semester.* 3 h.

A continuation of course 7 covering prose composition, modern Spanish fiction and plays, and selections from scientific Spanish.

Text-book: Bouilla's Spanish Daily Life, and selections of scientific Spanish.

Prerequisite: Spanish 7.



# SCHOOL OF MEDICINE

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## FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

WILLIAM P. HARLOW, B.A., M.D., Dean, *Boulder*.

LUMAN M. GIFFIN, M.D., *Boulder*,  
Professor of Surgery.

JOHN CHASE, B.A., M.D., *Denver*,  
Professor of Ophthalmology and Otology.

THOMAS E. TAYLOR, B.A., M.D., *Denver*,  
Professor of Obstetrics.

WILLIAM B. CRAIG, M.D., *Denver*,  
Professor of Surgery.

E. BARBER QUEAL, M.D., *Boulder*,  
Professor of Physiology.

GEORGE H. CATTERMOLLE, M.D., *Boulder*,  
Professor of Medicine (Pediatrics).

FRANK E. WAXHAM, M.D., *Denver*,  
Professor of Rhinology and Laryngology.

FRANCIS RAMALEY, Ph.D., *Boulder*,  
Professor of Histology and Embryology.

CHARLES FISHER ANDREW, M.D., *Longmont*,  
Professor of Materia Medica and Therapeutics.

CHARLES S. ELDER, M.D., *Denver*,  
Professor of Surgery (Gynecology).

NEWTON WIEST, M.D., *Denver*,  
Professor of Dermatology.

\* JOHN B. EKELEY, Ph.D., *Boulder*,  
Professor of Chemistry.

JAMES R. ARNEILL, B.A., M.D., *Denver*,  
Professor of Medicine (Clinical Medicine).

RICHARD W. CORWIN, M.D., LL.D., *Pueblo*,  
Professor of Surgery.

CHARLES B. LYMAN, M.D., *Denver*,  
Professor of Surgery.

JOHN M. FOSTER, M.D., *Denver*,  
Professor of Otology.

EDWARD JACKSON, M.A., M.D., *Denver*,  
Professor of Ophthalmology.

CARROLL E. EDSON, M.A., M.D., *Denver*,  
Professor of Medicine (Theory and Practice).

EDWARD F. DEAN, M.D., *Denver*,  
Professor of Anatomy.

ROSS C. WHITMAN, B.A., M.D., Secretary, *Boulder*,  
Professor of Pathology.

OSCAR M. GILBERT, M.D., *Boulder*,  
Professor of Medicine (Clinical Medicine).

ALVIN R. PEEBLES, M.D., *Boulder*,  
Professor of Medicine (Therapeutics).

CLOUGH T. BURNETT, M.D., *Boulder*,  
Professor of Bacteriology.

ARTHUR L. KENNEDY, M.D., *Denver*,  
Assistant Professor of Medicine.

EUGENE H. ROBERTSON, Ph.M., M.D., *Boulder*,  
Lecturer on Electro-Therapeutics.

GEORGE E. NEUHAUS, M.D., *Denver*,  
Lecturer on Neurology and Psychiatry.

EDWARD DELEHANTY, M.D., *Denver*,  
Lecturer on Neurology.

THEODORE D. A. COCKERELL, *Boulder*,  
Lecturer on Comparative Anatomy.

OLIVER LYONS, M.D., *Denver*,  
Lecturer on Genito-Urinary Diseases.

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\* On leave of absence, 1909-1910.

EDWARD B. TROVILLION, M.D., *Boulder*,  
Instructor in Anatomy.

WALTER W. REED, M.D., *Boulder*,  
Instructor in Obstetrics.

WILLIAM A. JOLLEY, M.D., *Boulder*,  
Instructor in Pharmacology.

WILLARD J. WHITE, M.A., M.D., *Longmont*,  
Instructor in Medical Jurisprudence.

JACOB CAMPBELL, M.D., *Boulder*,  
Instructor in Minor Surgery.

JOHN ANDREW, B.A., M.D., *Longmont*,  
Instructor in Anatomy.

FRANK R. SPENCER, B.A., M.D., *Boulder*,  
Instructor in Laryngology and Rhinology; Ophthalmology and Otology.

CLAY E. GIFFIN, B.A., M.D., *Boulder*,  
Instructor in Surgery.

HENRY DENISON, B.A., M.D., *Denver*,  
Instructor in Medicine.

CARBON GILLASPIE, M.D., *Boulder*,  
Instructor in Anatomy.

J. EDWARD NAUGLE, B.A.,  
Assistant in Physiology.

HARRY C. EWING,  
Assistant in Pathology.

AMMY B. EDGAR,  
Assistant in Pathology.

WILLIAM OTIS CALLAWAY,  
Assistant in Bacteriology

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## DISPENSARY STAFF

### MEDICINE

JAMES R. ARNEILL, B.A., M.D.

OSCAR M. GILBERT, M.D.

ALVIN R. PEEBLES, M.D.

*PEDIATRICS*

GEORGE H. CATTERMOLLE, M.D.

*NEUROLOGY*

GEORGE E. NEUHAUS, M.D.

*SURGERY*

LUMAN M. GIFFIN, M.D.

CHARLES B. LYMAN, M.D.

JACOB CAMPBELL, M.D.

*OBSTETRICS*

WALTER W. REED, M.D.

*GYNECOLOGY*

CHARLES S. ELDER, M.D.

*OPHTHALMOLOGY*

JOHN CHASE, B.A., M.D.

*OTOLOGY*

JOHN M. FOSTER, M.D.

FRANK R. SPENCER, B.A., M.D.

*RHINOLOGY AND LARYNGOLOGY*

FRANK E. WAXHAM, M.D.

FRANK R. SPENCER, B.A., M.D.

*DERMATOLOGY AND GENITO-URINARY SURGERY*

E. BARBER QUEAL, M.D.

WILLIAM A. JOLLEY, M.D.

NEWTON WIEST, M.D.

*HOSPITAL COMMITTEE*

WILLIAM P. HARLOW, B.A., M.D., Chairman,

OSCAR M. GILBERT, M.D.

WALTER W. REED, M.D.

FRANK R. SPENCER, B.A., M.D.

LUMAN M. GIFFIN, M.D., Superintendent of Hospital.

*DIRECTOR OF CLINICAL LABORATORIES*

ALVIN R. PEEBLES, M.D.

# GENERAL STATEMENT

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## ANNOUNCEMENT

The Medical Department of the University of Colorado was opened in September, 1883. The Department has kept fully abreast of the best schools in the country, both as to methods of teaching and equipment. Special stress has always been laid on a thorough course of instruction in the fundamental branches, embraced in the curriculum of the first two years of the course, without which the mastery of the remainder of the curriculum is impossible. At the same time, the clinical facilities afforded by the University Hospital, which belongs to the University, and is used for teaching purposes, and the Dispensary, offer to students training in the clinical branches. The school is a member of the Association of American Medical Colleges.

## BUILDINGS

**MEDICAL BUILDING**—The Medical Building is a two-story brick structure with three one-story wings, located at the southwest corner of the campus. It affords class rooms for lecture and recitation purposes, two large laboratories with abundant light on three sides, store rooms, general offices, and private laboratories for members of the faculty, and for advanced and graduate work.

**ANATOMY BUILDING**—This building was erected in 1908. It contains a large dissecting room, cloak rooms, an embalming room, and refrigerating plant capable of accommodating about 35 cadavers.

**CHEMISTRY BUILDING**—The Chemistry Building is located near the center of the campus. It is a two-story brick building, constructed with special reference to the teaching of chemistry, and devoted entirely to that purpose. It contains two large lecture rooms, and six laboratories, with abundant equipment for every kind of chemical work, reading rooms, private laboratories, stock rooms, balance room, chemical museum, etc.

**HALE SCIENCE BUILDING**—This is a four-story stone building with two two-story wings, located near the north end of the campus. It affords accommodations for the department of Biology, which includes the departments of Histology, Embryology and Animal Zoology, on the second floor. With the completion of the new Law Building, largely increased space becomes available for the former department. The laboratories are abundantly lighted from three sides.

**HOSPITAL**—The Hospital was erected during the summer of 1898, and was dedicated November 19th of that year. The building is located on a high bluff adjacent to the campus and overlooking the city of Boulder and the great plains, and affords a beautiful view of the foothills and Arapahoe Peaks in the distance. It contains accommodations for forty patients, in wards and private rooms, and has in addition an operating room, a large and very fully equipped clinical laboratory, a sun parlor, sterilizing rooms, etc. It is constructed according to the most approved plans of hospital construction, and its equipment is complete and thoroughly modern.

**NURSES HOME**—The Nurses' Home is an eight-room, one-story frame cottage, situated west of the Hospital and near the latter.

**LIBRARY**—The University Library contains 52,000 bound volumes. A reading room for the special use of medical students has been provided, and in this the files of the most important American, English, French and German medical periodicals and important books are found for the use of the students who have direct access to the shelves. The Library is open daily except Sunday, from 8:15 a. m. to 5:30 p. m., and from 7:00 to 10:00 p. m. throughout the academic year.

The following Medical Journals are now on file in the Library:

|                                                                           |                                                       |
|---------------------------------------------------------------------------|-------------------------------------------------------|
| American Academy of Medicine Bulletin.                                    | British Medical Journal.                              |
| American Journal of Anatomy.                                              | Centralblatt f. Bakteriologie.                        |
| American Journal of Medical Sciences.                                     | Abteil. I. Originale and Referate; II.                |
| American Journal of Obstetrics and Medical Record.                        | Centralblatt f. Stoffwechsel und Verdauungskrankheit. |
| American Journal of Physiology.                                           | Colorado Medical Journal.                             |
| American Medical Association Journal.                                     | Dental Record. (Lond.)                                |
| Annals of Surgery.                                                        | Dental Register (Cincinnati).                         |
| Archiv f. Pathologie. Anatomie u. Physiologie u. f. Klin. Med. (Virchow.) | Deutschen Medicinische Wochenschrift.                 |
| Archives of Internal Medicine.                                            | Dominion Dental Journal. (Toronto.)                   |
| Berliner Klinische Wochenschrift. (Berlin).                               | Health.                                               |
| Brain.                                                                    | Index Medicus.                                        |
|                                                                           | Index Surgeon General's Library.                      |
|                                                                           | International Clinics.                                |
|                                                                           | Johns Hopkins Hospital Bulletin.                      |



- Journal of Comparative Neurology.  
 Journal of Experimental Medicine.  
 Journal of Infectious Diseases.  
 Journal of Medical Research.  
 Journal of Nervous and Mental Diseases.  
 Journal of Physiology.  
 Lancet.  
 London Pathological Society, Transactions.  
 Medical and Surgical Journal. (Boston.)  
 Medical Standard.  
 Memphis Medical Monthly.  
 Modern Medicine.  
 Muenchner Medicinische Wochenschrift.  
 Neurologische Centralblatt.  
 New York and Philadelphia Medical Journal.
- Public Health Journal.  
 Quarterly Journal of Microscopical Science.  
 Review of Neurology. (Edinburgh.)  
 Revue de Medicine. (Paris.)  
 Royal Microscopical Society. Journal.  
 Schmidt's Jahrbuch der in-u. Aus-landischen gesammten Medicin.  
 Scienze Mediche Archiv. (Turin, Italy.)  
 Semaine Medicale. (Paris.)  
 Studien u. d. Hirnrinde, Cajal.  
 Therapeutic Gazette.  
 University of Texas. Medical Series.  
 Wiener Klinische Wochenschrift. (Vienna.)  
 Zeitschrift f. Tuberculosis.

DISPENSARY—The Dispensary is located in the heart of the city of Boulder. It contains reception rooms, rooms for the examination and treatment of patients, and a fully equipped clinical laboratory.

## LABORATORIES

The Anatomical Laboratory is situated in the Anatomical Building, already referred to. In addition to abundant material for dissections, it contains a large and very valuable collection of mounted preparations, skeletons, charts, models, etc., which is accessible to the students, under proper supervision, for use in connection with the work of the department.

Histology and Embryology are taught in the biological department. The laboratories are provided with compound microscopes, microtomes, thermostat, models, projection lantern, and other necessary equipment.

The Pathological Laboratory is a large room in the Medical Building, lighted on three sides. It is equipped with Leitz microscopes, the various types of microtome, of which four are provided for the use of students, and all re-agents, stains, etc., needed for thorough examination of material according to the most modern methods. Accommodations are afforded for advanced or research work, and every encouragement is offered to students to undertake work of this character. The Pathological Museum is already quite extensive, and further material derived from operations, post mortem examinations, and from other sources, is being constantly added.

The course in Bacteriology is conducted in one of the large laboratories in the Medical Building. During the past two years a large amount of new and valuable equipment has been added, and the labo-

ratory is fully equipped for teaching this branch under the most favorable conditions. The equipment includes an ample number of high power Leitz microscopes, with oil immersion lenses, and a complete equipment of sterilizers, a large incubating room, affording a separate incubator for each student, an abundance of glassware, and special apparatus for bacteriological examination of air, water, soil, milk, food, etc. Convenient to the laboratory are the animal rooms, with a full supply of animals for experimental purposes.

The courses in chemistry for the medical students are given in the Chemistry Building, which is situated conveniently near to the Medical Building.

The Physiological Laboratory has just been completed and newly equipped with a complete set of apparatus for the laboratory teaching of this important branch. The space available is large enough to accommodate a large number of students without crowding.

The Laboratory of Pharmacology is contained in a large room, well lighted from three sides, and is furnished with all the apparatus needed for the complete laboratory demonstration of the action of drugs.

## CLINICS

Clinics are held daily at the University Hospital, which, as already mentioned, belongs to the University, and is designed for this special purpose.

In addition to the clinics at the Hospital, dispensary clinics are held daily at the Dispensary by different members of the Medical Faculty, under whose direction and subject to whose approval, patients are examined, their histories taken, and treatment prescribed by the students. The Dispensary is largely attended and affords a large number of varied and interesting cases daily.

The Faculty believes that the greatest benefit from clinics can only be obtained for the students by bringing them into the closest possible touch with the patients. In accordance with this belief, all the clinics of the Department are conducted as "clinic conferences," whereby the students examine and treat the patients exactly as if they were their own private cases, superintend the after treatment of surgical cases, administer the anesthetics, and even assist in major operations.

For each senior class arrangements are made for extra clinics weekly in Denver.

## SESSION OF 1910-1911.

The next term begins September 12, 1910.

Examinations of credentials for admission will be held September 12, beginning at 9 o'clock. For additional information, address the Dean, William P. Harlow, M.D., or the Secretary, Ross C. Whitman, M.D., Boulder, Colorado.

## REQUIREMENTS FOR ADMISSION

A certificate of moral character must be presented from two physicians of the State in which the applicant last resided.

Beginning in September, 1910, two years of college work, estimated at sixty semester hours, in addition to a standard four-year high-school course, will be required for admission. This applies to the class entering in 1910 and graduating in 1914. Classes graduating in 1911, 1912, and 1913 are under the previous requirement of a full four-year high-school course or its equivalent.

Students are earnestly advised to be present at the opening of the session. No student will be allowed to enter later than the fifth week of the academic year.

## ADVANCED STANDING

Candidates who present positive evidence of having taken a full course of instruction in some other medical college of good standing and with equal preliminary requirements for admission, will be admitted to advanced standing in this School on presenting satisfactory evidence of having passed examinations in all branches entitling them to such standing.

## COURSES LEADING TO TWO DEGREES

Students who pursue courses during the first two years of collegiate work, which are not included in the medical curriculum, or who, in case medical courses have been included in the work of the first two years, take a corresponding amount of non-medical courses during the later years of the course, may earn a degree in Arts after four years, and a degree in Medicine after two additional years, thus affording a course leading to two degrees after six years' work. The subjects in the Medical Curriculum for which credit is given in the College of Liberal Arts are as follows:

|                                             |          |
|---------------------------------------------|----------|
| First Year Anatomy.....                     | 8 hours  |
| Second Year Anatomy.....                    | 8 hours  |
| Histology .....                             | 8 hours  |
| Embryology .....                            | 3 hours  |
| Physiology and Physiological Chemistry..... | 10 hours |
| Chemistry, Inorganic and Organic.....       | 10 hours |
| Bacteriology .....                          | 4 hours  |
| Pathology .....                             | 9 hours  |

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60 hours

This work, which constitutes part of the medical curriculum of the first and second years, is accepted in the College of Liberal Arts as counting toward a degree. The allowance of sixty hours credit in the above schedule, is based on a requirement of one hundred and twenty hours for graduation.

### FEES

For fees see page 63.

## COURSES AND METHODS

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The tables below give the schedule of courses for the academic year 1909-1910, followed by a summary, giving the number of hours spent in each subject, classified as lectures, laboratory hours, and clinics, by years.

## SCHEDULE

## FIRST YEAR

FIRST SEMESTER, 1909-1910

|                | Monday                                                                                    | Tuesday                                                                                   | Wednesday                                                                                 | Thursday                                                                                  | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 11:00 |                                                                                           | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        |                                                                                           | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        |                                                                                           |
| 11:30 to 12:20 | Gen. Chem.<br>Lectures<br>Ch. B.<br>Dr. Ekeley                                            | As previous<br>hour                                                                       | 11:00 to 11:30<br>Chapel<br>Gen. Chem.<br>Lectures<br>Ch. B.<br>Dr. Ekeley                | As previous<br>hour                                                                       | Gen. Chem.<br>Lectures<br>Ch. B.<br>Dr. Ekeley                                            |
| 1:30 to 3:20   | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.              | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.              | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.              | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.              |                                                                                           |
| 3:30 to 4:20   | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           |                                                                                           |



*FIRST YEAR*  
SECOND SEMESTER, 1909-1910

|                | Monday                                                                                    | Tuesday                                                                                   | Wednesday                                                                                 | Thursday                                                                                  | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 11:00 | Comparative<br>Anatomy<br>Prof. Cockerell<br>Hale                                         | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        | Comparative<br>Anatomy<br>Prof. Cockerell<br>Hale                                         | 10:10 to 11:30<br>Pharmacology<br>Lec. and Lab.<br>Dr. Jolley<br>East Lab.                | 10:10 to 11:30<br>Pharmacology<br>Lec. and Lab.<br>Dr. Jolley<br>East Lab.                |
| 11:30 to 12:20 | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            | As previous<br>hour                                                                       | 11:00 to 11:30<br>Chapel<br>Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                |                                                                                           | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |
| 1:30 to 3:20   | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        |
| 3:30 to 4:20   | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           |                                                                                           |

**SECOND YEAR**  
**FIRST SEMESTER, 1909-1910**

|                | Monday                                                                                    | Tuesday                                                                                                       | Wednesday                                                                                 | Thursday                                                                                  | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                     | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 12:20 | Bacteriology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Burnett<br>West Lab.         | 11:00 to 11:30<br>Chapel<br>Bacteriology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Burnett<br>West Lab. | Bacteriology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Burnett<br>West Lab.         | Bacteriology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Burnett<br>West Lab.         | Bacteriology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Burnett<br>West Lab.         |
| 1:30 to 2:20   | Organic Chem.<br>Laboratory<br>Ch. B.                                                     | Organic<br>Chemistry<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                                      | Organic<br>Chemistry<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                  | Organic<br>Chemistry<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                  | Organic<br>Chemistry<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                  |
| 2:30 to 3:20   |                                                                                           |                                                                                                               | Pathology<br>Laboratory<br>Dr. Whitman<br>West Lab.                                       |                                                                                           | Organic Chem.<br>Laboratory<br>Ch. B.                                                     |
| 3:30 to 4:20   | Pathology<br>Quiz.<br>Dr. Whitman<br>S. L.                                                | 4:00 to 4:50<br>Materia Med.<br>Lectures<br>Dr. C. F. Andrew<br>N. L.                                         |                                                                                           | 4:00 to 4:50<br>Materia Med.<br>Lectures<br>Dr. C. F. Andrew<br>N. L.                     |                                                                                           |

*SECOND YEAR*  
SECOND SEMESTER, 1909-1910

|                | Monday                                                                                                               | Tuesday                                                                                                                                                                          | Wednesday                                                                                                            | Thursday                                                                                                                                         | Friday                                                                                                               |
|----------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                            | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                                                                                        | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                            | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                                                        | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B.                            |
| 10:00 to 12:20 | First 8 weeks<br>Pathology<br>Laboratory<br>Dr. Whitman<br>West L.<br><br>Second 8 weeks<br>Physiology<br>Laboratory | 11:00 to 11:30<br>Chapel<br><br>First 8 weeks<br>Pathology<br>Laboratory<br>Dr. Whitman<br>West L.<br><br>Second 8 weeks<br>Pharmacology<br>Laboratory<br>Dr. Burnett<br>West L. | First 8 weeks<br>Pathology<br>Laboratory<br>Dr. Whitman<br>West L.<br><br>Second 8 weeks<br>Physiology<br>Laboratory | First 8 weeks<br>Pathology<br>Laboratory<br>Dr. Whitman<br>West L.<br><br>Second 8 weeks<br>Pharmacology<br>Laboratory<br>Dr. Burnett<br>West L. | First 8 weeks<br>Pathology<br>Laboratory<br>Dr. Whitman<br>West L.<br><br>Second 8 weeks<br>Physiology<br>Laboratory |
| 1:30 to 2:20   | Phys. Chem.                                                                                                          | Phys. Chem.<br>Lectures<br>Dr. Whitman<br>S. L.                                                                                                                                  | Phys. Chem.                                                                                                          | Phys. Chem.<br>Lectures<br>Dr. Whitman<br>S. L.                                                                                                  | Hygiene<br>Quiz<br>Dr. Whitman<br>S. L.                                                                              |
| 2:30 to 3:20   | Laboratory                                                                                                           | Pathology<br>Quiz<br>Dr. Whitman<br>S. L.                                                                                                                                        | Laboratory                                                                                                           | Hygiene<br>Quiz<br>Dr. Whitman<br>S. L.                                                                                                          | Pathology<br>Quiz<br>Dr. Whitman<br>S. L.                                                                            |
| 3:30 to 4:20   | Ch. B.                                                                                                               | 4:00 to 5:00<br>Materia<br>Medica<br>Dr. Andrew<br>R. R.                                                                                                                         | Ch. B.                                                                                                               | 4:00 to 5:00<br>Materia<br>Medica<br>Dr. Andrew<br>R. R.                                                                                         |                                                                                                                      |

**THIRD YEAR**  
**FIRST AND SECOND SEMESTERS, 1909-1910**

|                | Monday                                                                    | Tuesday                                                                | Wednesday                                           | Thursday                                                        | Friday                                                |
|----------------|---------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------|
| 8:10 to 9:00   | Principles<br>Surgery<br>Dr. C. Giffin                                    | Minor Surgery<br>Dr. Campbell                                          | Principles<br>Surgery<br>Dr. C. Giffin              | Minor Surgery<br>Dr. Campbell                                   | Principles<br>Surgery<br>Dr. C. Giffin                |
| 9:10 to 10:00  | Obstetrics<br>Dr. Reed                                                    | Medicine<br>Quiz<br>Dr. Peebles                                        | Principles<br>Neurology<br>Dr. Neuhaus              |                                                                 | 1st Semester only<br>Pathology<br>Quiz<br>Dr. Whitman |
| 10:10 to 11:00 | Medicine<br>Quiz<br>Dr. Peebles                                           |                                                                        |                                                     | Cadaver and<br>Dog Surgery<br>Laboratory<br>Dr. Campbell        | Hematology<br>Laboratory<br>Dr. Peebles               |
| 11:30 to 12:20 | 11:00 to 11:30<br>Chapel<br><br>Gynecology<br>Lectures<br>Dr. Elder       | Tuesday and<br>Wednesday<br>Electro Thera-<br>peutics<br>Dr. Robertson | Wednesday<br>Clinical Diag-<br>nosis<br>Dr. Peebles |                                                                 | Medicine<br>Quiz<br>Dr. Peebles                       |
| 1:30 to 2:20   | 2:00 to 4:00<br>Eye, ear, nose,<br>throat<br>Demonstration<br>Dr. Spencer | Pathology<br>Laboratory<br>Dr. Whitman                                 | Medicine<br>Lectures<br>Dr. Edson                   | Physical Diagnosis<br>Quiz and<br>Practical Work<br>Dr. Denison |                                                       |
| 2:30 to 3:20   |                                                                           |                                                                        |                                                     |                                                                 |                                                       |

*FOURTH YEAR*  
FIRST SEMESTER, 1909-1910

|                | Monday                                                              | Tuesday                                            | Wednesday                                   | Thursday                                    | Friday                                       |
|----------------|---------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------|---------------------------------------------|----------------------------------------------|
| 8:10 to 9:00   | Surgery<br>Lectures<br>Dr. Giffin                                   | Surgery<br>Lectures<br>Dr. Giffin                  | Psychiatry<br>Lectures<br>Dr. Neuhaus       | Surgery<br>Lectures<br>Dr. Giffin           | Surgery<br>Lectures<br>Dr. Giffin            |
| 9:10 to 10:00  | Sec. 1<br>Dispensary<br>Sec. 2<br>Ward Walk                         | Sec. 1<br>Dispensary<br>Sec. 2<br>Ward Walk        | Sec. 1<br>Dispensary<br>Sec. 2<br>Ward Walk | Sec. 1<br>Dispensary<br>Sec. 2<br>Ward Walk | Sec. 1<br>Dispensary<br>Sec. 2<br>Laboratory |
| 10:10 to 11:00 | Gynecology<br>Lectures<br>Dr. Elder                                 | Dietetics<br>Lectures<br>Dr. Peebles               |                                             |                                             |                                              |
| 11:30 to 12:20 | 11:00 to 11:30<br>Chapel<br>Therapeutics<br>Lectures<br>Dr. Peebles | Obstetrics<br>Lectures<br>Dr. Reed                 | Case Teaching<br>Quiz<br>Dr. Kennedy        | Therapeutics<br>Lectures<br>Dr. Peebles     | Surgery<br>Clinic<br>Dr. Lyman               |
| 1:30 to 2:20   | Pediatrics<br>Lectures<br>Dr. Cattermole                            | Dermatology<br>Lectures<br>and Clinic<br>Dr. Wiest | Neurology<br>Lectures<br>Dr. Delehanty      | Pediatrics<br>Lectures<br>Dr. Cattermole    |                                              |
| 2:30 to 3:20   |                                                                     |                                                    | Medicine<br>Lectures<br>Dr. Edson           | Ophthalmology<br>Lectures<br>Dr. Jackson    | Obstetrics<br>Lectures<br>Dr. Taylor         |
| 3:30 to 4:20   | Medicine<br>Clinic<br>Dr. Gilbert                                   |                                                    |                                             |                                             | Medicine<br>Clinic<br>Dr. Arneill            |
| 7:10 to 8:00   |                                                                     |                                                    | Ophthalmology<br>Clinic<br>Dr. Chase        |                                             |                                              |

**FOURTH YEAR**  
SECOND SEMESTER, 1909-1910

|                | Monday                                                              | Tuesday                                            | Wednesday                                                                   | Thursday                                                                             | Friday                                                                    |
|----------------|---------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 8:10 to 9:00   | Surgery<br>Lectures<br>Dr. Giffin                                   | Surgery<br>Lectures<br>Dr. Giffin                  | Psychoneuroses<br>Lectures<br>Dr. Neuhaus                                   | Surgery<br>Lectures<br>Dr. Giffin                                                    | Surgery<br>Lectures<br>Dr. Giffin                                         |
| 9:10 to 10:00  | Sec. 2<br>Dispensary<br>Sec. 1<br>Ward walk                         | Sec. 2<br>Dispensary<br>Sec. 1<br>Ward walk        | Sec. 2<br>Dispensary<br>Sec. 1<br>Ward walk                                 | Sec. 2<br>Dispensary<br>Sec. 1<br>Ward walk                                          | Sec. 2<br>Dispensary<br>Sec. 1<br>Laboratory                              |
| 10:10 to 11:00 | Gynecology<br>Lectures<br>Dr. Elder                                 | Dietetics<br>Lectures<br>Dr. Peebles               |                                                                             | Laryngology<br>Lectures and<br>Clinics<br>Dr. Waxham                                 | Surgery<br>Clinic<br>Dr. Lyman                                            |
| 11:30 to 12:20 | 11:00 to 11:30<br>Chapel<br>Therapeutics<br>Lectures<br>Dr. Peebles | Obstetrics<br>Lectures<br>Dr. Reed                 | Case Teaching<br>Quiz<br>Dr. Kennedy                                        | Therapeutics<br>Lectures<br>Dr. Peebles                                              |                                                                           |
| 1:30 to 2:20   | Pediatrics<br>Lectures<br>Dr. Cattermole                            | Dermatology<br>Lectures and<br>Clinic<br>Dr. Wiest | Neurology<br>Lectures<br>Dr. Delehanty<br>Medicine<br>Lectures<br>Dr. Edson | Pediatrics<br>Lectures<br>Dr. Cattermole<br>Otolaryngology<br>Lectures<br>Dr. Foster | Obstetrics<br>Lectures<br>Dr. Taylor<br>Medicine<br>Clinic<br>Dr. Arneill |
| 2:30 to 3:20   |                                                                     |                                                    |                                                                             |                                                                                      |                                                                           |
| 3:30 to 4:20   | Medicine<br>Clinic<br>Dr. Gilbert                                   |                                                    |                                                                             |                                                                                      |                                                                           |
| 7:10 to 8:00   |                                                                     |                                                    | Ophthalmology<br>Clinic<br>Dr. Chase                                        |                                                                                      |                                                                           |



## SUMMARY

| SUBJECTS                                                   | First Year |      |       | Second Year |      |       | Third Year |      |       |       | Fourth Year |      |       |       | Grand Total |
|------------------------------------------------------------|------------|------|-------|-------------|------|-------|------------|------|-------|-------|-------------|------|-------|-------|-------------|
|                                                            | Lec.       | Lab. | Total | Lec.        | Lab. | Total | Lec.       | Lab. | Clin. | Total | Lec.        | Lab. | Clin. | Total |             |
|                                                            |            |      |       |             |      |       |            |      |       |       |             |      |       |       |             |
| Anatomy . . . . .                                          | 110        | 180  | 290   | 108         | 180  | 288   | .          | .    | .     | .     | .           | .    | .     | .     | 608         |
| Chemistry . . . . .                                        | 106        | 128  | 234   | 96          | 160  | 256   | .          | .    | .     | .     | .           | .    | .     | .     | 490         |
| Histology . . . . .                                        | 40         | 120  | 160   | .           | .    | .     | .          | .    | .     | .     | .           | .    | .     | .     | 160         |
| Embryology . . . . .                                       | 36         | 60   | 96    | .           | .    | .     | .          | .    | .     | .     | .           | .    | .     | .     | 96          |
| Physiology . . . . .                                       | 128        | 128  | 256   | 58          | 58   | 116   | .          | .    | .     | .     | .           | .    | .     | .     | 186         |
| Pharmacology . . . . .                                     | 16         | 32   | 48    | 64          | 37   | 101   | .          | .    | .     | .     | .           | .    | .     | .     | 149         |
| Bacteriology . . . . .                                     | 48         | 196  | 244   | .           | .    | .     | .          | .    | .     | .     | .           | .    | .     | .     | 244         |
| *Pathology . . . . .                                       | .          | .    | .     | 64          | 128  | 192   | 16         | 180  | .     | 196   | .           | .    | .     | .     | 388         |
| Hygiene . . . . .                                          | .          | .    | .     | 32          | .    | 32    | .          | .    | .     | .     | .           | .    | .     | .     | 32          |
| Surgery . . . . .                                          | .          | .    | .     | .           | .    | .     | 160        | 56   | 56    | 272   | 128         | .    | 260   | 388   | 660         |
| Medicine . . . . .                                         | .          | .    | .     | .           | .    | .     | 128        | .    | .     | 128   | 96          | .    | 362   | 458   | 586         |
| Physical Diagnosis . . . . .                               | .          | .    | .     | .           | .    | .     | 20         | .    | 76    | 96    | .           | .    | .     | .     | 96          |
| Clinical Diagnosis . . . . .                               | .          | .    | .     | .           | .    | .     | 32         | 40   | .     | 72    | .           | 32   | .     | 32    | 104         |
| Therapeutics, electro-therapeutics and dietetics . . . . . | .          | .    | .     | .           | .    | .     | 24         | 24   | .     | 48    | 96          | .    | .     | 96    | 144         |
| Neurology and Psychiatry . . . . .                         | .          | .    | .     | .           | .    | .     | 32         | 32   | 32    | 32    | 32          | .    | 32    | 64    | 96          |
| †Obstetrics . . . . .                                      | .          | .    | .     | .           | .    | .     | 32         | .    | .     | 32    | 32          | .    | 32    | 64    | 96          |
| Gynecology . . . . .                                       | .          | .    | .     | .           | .    | .     | 32         | .    | .     | 32    | 32          | .    | 96    | 128   | 160         |
| Eye, ear, nose, throat . . . . .                           | .          | .    | .     | .           | .    | .     | 32         | .    | 32    | 64    | 48          | .    | 48    | 96    | 160         |
| Pediatrics . . . . .                                       | .          | .    | .     | .           | .    | .     | 32         | .    | .     | .     | 32          | .    | 64    | 96    | 96          |
| Dermatology and Syphilis . . . . .                         | .          | .    | .     | .           | .    | .     | .          | .    | .     | .     | 32          | .    | 64    | 96    | 96          |
| Medical Jurisprudence . . . . .                            | .          | .    | .     | .           | .    | .     | .          | .    | .     | .     | 32          | .    | .     | 32    | 32          |
| Totals . . . . .                                           | 514        | 716  | 1230  | 364         | 563  | 927   | 508        | 300  | 164   | 972   | 560         | 32   | 958   | 1550  | 4679        |

\*Time at autopsies not included.

†Time at obstetrical clinics not included.

The above table is based on a teaching year of thirty-two weeks, four weeks having been subtracted from the academic year of thirty-six weeks, one week for registration, two weeks for examinations, and one week for graduation exercises.

# THE COURSES IN DETAIL

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## FIRST YEAR

## ANATOMY

PROFESSORS DEAN AND COCKERELL, AND DRs. TROVILLION, JOHN ANDREW, AND GILLASPIE:—

Anatomy is taught by means of lectures, recitations, drawing, and demonstrations on the cadaver. Work in the dissecting room is prosecuted under the personal supervision of the professor and demonstrators of anatomy. Systematic demonstrations are made on the cadaver, and no pains are spared to have the student acquire a thorough knowledge of the anatomical details which are the necessary foundation for a complete medical education. Each student dissects two complete lateral halves of the body, one-half in the first year, and a second half in the following year.

Every facility and encouragement will be given the student in the anatomical room to pursue work beyond the requirements of the prescribed course. The anatomical material is furnished free.

The working hours are from 8:10 to 10:00, throughout the year. The time is apportioned as follows:

1. LECTURES. *Both semesters.* 2 h. as appointed.

Covering the subjects of osteology, arthrology, myology, and angiology.

Professor Dean.

2. RECITATIONS. *Both semesters.* 2 h. as appointed. .

These carry the student over the work covered by the lectures.

Dr. Andrew.

3. DISSECTIONS. *Both semesters.* 6 h.

Students in this year will be required to dissect not less than one complete lateral half under the direct supervision of the dem-

onstructor of anatomy and assistants who will be in attendance daily. Quizzes will be held over the cadaver on the work done.

Professor Dean and Assistants.

4. COMPARATIVE ANATOMY. *Second semester. M. W. 10:10 to 11:00.*

The lectures cover the principles of comparative anatomy, with discussions of questions of heredity, adaptation, evolution, etc.

Professor Cockerell.

Text-books: Cunningham, \$6.00; Morris, \$7.50; Piersol, Holden's Practical Anatomy, \$3.00; Treve's Applied Anatomy, Sobotta, McMurrich.

Collateral Reading: Toldt's Atlas of Human Anatomy, Deaver's Surgical Anatomy, Quain's Anatomy, Edinger's Anatomy of the Nervous System, Spalteholz's Atlas of Human Anatomy.

## CHEMISTRY

MR. CURTIS:—

1. GENERAL INORGANIC CHEMISTRY. *Both semesters. M. W. F. 11:30 to 12:20.*

Lectures.

2. GENERAL INORGANIC CHEMISTRY. *First semester. Tu. Th. 10:10 to 12:20; Second semester. Tu. 10:10 to 12:20. F. 1:30 to 4:30.*

Laboratory. A course in qualitative analysis is included.

Text-book: Holleman, \$2.50; Manual, 75 cents.

## HISTOLOGY AND EMBRYOLOGY

PROFESSOR RAMALEY AND MR. ROBBINS:—

1. HISTOLOGY. *First semester. M. Tu. W. Th. 1:30 to 3:20. To about February 15.*

Lectures, laboratory and text-book work.

The course begins with the study of the cell and simple tissues; then the glands, the teeth, the vascular and lymphatic systems are taken up. In the second semester the respiratory, excretory,

reproductive, and nervous systems, and sense organs are studied. Sufficient technical instruction is given to enable the students to work for themselves.

2. EMBRYOLOGY. *Second semester. M. Tu. W. Th. 1:30 to 3:20.*

From about February 15 to June 1.

The course begins with a general account of the germ cell and the different methods of reproduction. Suitable material is provided for work on typical methods of gastrulation and the study of the blastoderm in different forms. The development of the chick and pig will be studied in detail. In the last part of the course attention is given more particularly to human embryology.

3. MEDICAL ZOOLOGY. *Second semester. M. Tu. W. Th. 1:30 to 3:20.* For three weeks.

In this course is given the structure and life history of such animals as are of most importance in the causation or transmission of disease. The work consists of lectures, illustrated with lantern slides, and of laboratory work. Some of the more important forms discussed are the following: mosquitoes, ticks, mites, parasitic worms, protozoa. Special attention is given to life history, methods of infection, etc.

Text-books: Histology, Ferguson, \$4.00; Embryology, Bailey, \$4.00; McMurrich.

Reference books: Histology, Stohr; Embryology, Minot.

Library reference works: Parker and Haswell, Leuckhart, Cambridge Natural History, Hertwig. Students are also referred to recent literature in current Medical Journals.

## PHYSIOLOGY

PROFESSOR QUEAL:—

1. PHYSIOLOGY. *Both semesters. M. Tu. W. Th. 3:30 to 4:20.*

The work is conducted in the form of recitations on assigned subjects, with a limited amount of explanatory lecture. The course covers the subjects of general and cellular physiology, physiology of nerve and muscle, digestion, absorption, secretion, nutrition,

animal heat and force, blood, lymph, circulation, respiration and excretion, physiology of the central nervous system and the special senses.

Text-books: Brubacker, \$4.00; Lombard.

Reference books: Howell, Hall, Tigerstedt.

## PHARMACOLOGY

DR. JOLLEY:—

1. PHARMACOLOGY. *Second semester. Th. F. 10:10 to 11:30.*

This is an introductory course, conducted chiefly as laboratory exercises, and designed to introduce the student to the various forms of drug preparations, and the elementary principles of drug action.

Text-book: Sollmann, \$4.00.

## SECOND YEAR

### ANATOMY

PROFESSOR DEAN, AND DRs. TROVILLION, JOHN ANDREW, AND GILLASPIE:—

The working hours are from 8:10 to 10:00 throughout the year. The time is apportioned as follows:

1. LECTURES. *Both semesters. 2 h. as appointed.*

These cover the nervous system. The gross and minute anatomy of the brain and spinal cord is taken up with special reference to the functions of the nerve tracts. Regional and clinical anatomy, surface landmarks on the living model are also studied.

Professor Dean.

2. RECITATIONS. *Both semesters. 2 h. as appointed.*

These follow the general plan of the lectures.

Dr. Trovillion.

3. DISSECTIONS. *Both semesters. 6 h.*

During this year a second complete lateral half is dissected, and students are required to study and make drawings of cross sections of the brain, spinal cord, and the cadaver.

Text-books: Cunningham, \$6.00; Morris, \$7.50; Piersol, Holden's Practical Anatomy, \$3.00; Treve's Applied Anatomy, Sobotta, McMurrich.

Collateral Reading: Toldt's Atlas of Human Anatomy, Deaver's Surgical Anatomy, Quain's Anatomy, Edinger's Anatomy of the Nervous System, Spalteholz's Atlas of Human Anatomy.

## BACTERIOLOGY

PROFESSOR BURNETT:—

1. GENERAL BACTERIOLOGY. *First semester. M. Tu. W. Th. F. 10:10 to 12:20.*

The course is divided into two main portions. In the first part of the course the student is instructed in the methods of bacteriologic technique and in the general principles of bacteriology. Many of the non-pathogenic bacteria are studied in the early part of the work. As soon as the student has studied a sufficient number of non-pathogenic micro-organisms a more detailed study of the pathogenic bacteria is entered upon. Much of this work is accompanied by animal experiments. In the latter part of the course some time is given to water and milk analysis and the methods of disinfection. Each student is required to work out and identify a number of organisms given out as unknown. Forty-eight lectures are given during the progress of the course, the remainder of the time being devoted to laboratory work. The laboratory is open on Saturdays, from 8:00 to 12:30, for the benefit of students who are unable to finish the assigned work during the week, but attendance on these days is not required.

Special work may be undertaken at any time by those qualified.

Text-books: Park's Pathogenic Bacteria and Protozoa, \$3.75; Jordan's Text-book of Bacteriology, Calkin's Protozoology, Abbott's Principles of Bacteriology, \$3.75; Williams' Bacteriology, Ricketts' Immunity, Chester's Manual of Determinative Bacteriology, Eyre's Bacteriological Technique, etc.

## PHYSIOLOGY

PROFESSOR BURNETT:—

1. PHYSIOLOGY. *Second semester, second half. M. Tu. W. 10:10 to 12:20.*



The course consists of practical laboratory exercises in which the student demonstrates for himself the physiological phenomena governing nerve-muscle, respiration, circulation, etc.

Text-books: Lombard's Manual, \$1.50; Hall's Manual.

## PHARMACOLOGY AND MATERIA MEDICA

PROFESSORS C. F. ANDREW AND BURNETT:—

1. MATERIA MEDICA. *Both semesters. Tu. Th. 4:00 to 4:50.*

This is a lecture course covering the important drugs used as therapeutic agents.

Professor Andrew.

2. PHARMACOLOGY. *Second semester, second half. Th. F. 10:10 to 12:20.*

The course consists of laboratory exercises conducted by the students, and demonstrations by the instructor, showing the action on animals of the most important drugs. The course is conducted in connection with the laboratory course in physiology described above.

Professor Burnett.

Text-books: Sollmann, \$4.00; Wood, \$5.00; Hare, \$4.00; Cushney, \$3.75.

## CHEMISTRY

PROFESSORS EKELEY AND WHITMAN, AND MR. CURTIS:—

1. ORGANIC CHEMISTRY. *First semester. Tu. W. Th. F. 1:30 to 2:20.*

The lecture course covers the different classes of organic compounds, with discussions of structural formulæ, and familiarizes the student with the important representatives of each group.

Professor Ekeley.

2. ORGANIC CHEMISTRY. *First semester. M. F. 2:30 to 4:20.*

The course consists of laboratory exercises in which the student obtains a first-hand knowledge of the compounds discussed in the lectures.

Professor Ekeley and Assistants.

3. PHYSIOLOGICAL CHEMISTRY. *Second semester. Tu. Th. 1:30 to 2:20.*

The recitations are designed to review and clarify the work of the laboratory course next described.

Professor Whitman.

4. PHYSIOLOGICAL CHEMISTRY. *Second semester. M. W. 1:30 to 4:20.*

After a review in the laboratory of the chemistry of the carbohydrates, fats, proteids; salivary, gastric, and intestinal digestion, etc., the student is made familiar with the various tests used in clinical medicine, by means of practical tests on unknowns furnished by the instructor.

Professor Whitman and Mr. Curtis.

Text-books: Holleman, \$2.25; Lab. Manual, \$0.80; Hawk, \$3.00.

## PATHOLOGY

PROFESSOR WHITMAN:—

1. GENERAL PATHOLOGY. *First semester. M. 3:30 to 4:20.. Th. 2:30 to 3:20. Second semester. Tu. F. 2:30 to 3:20.*

The course consists of recitations based on assigned portions of Zeigler's text.

2. PATHOLOGY. *First semester. 2:30 to 4:20. First half second semester. M. Tu. W. Th. F. 10:10 to 12:20.*

Specimens are given out to the class as unknowns, to be identified, described, and diagnosed. Approximately 225 specimens illustrating various microscopic lesions and tumors are demonstrated in this way during the course, and the students are required to make drawings of many of these.

Text-book: Ziegler, \$5.50.

## HYGIENE

PROFESSOR WHITMAN:—

1. HYGIENE. *Second semester. Th. 2:30 to 3:20. F. 1:30 to 2:20.*

The course consists of recitations based on assigned portions of Egbert's text.

Text-book: Egbert, \$2.25.

## THIRD YEAR

MEDICINE AND MEDICAL DIAGNOSIS AND  
THERAPEUTICS

PROFESSORS EDSON AND PEEBLES, AND DRs. ROBERTSON AND DEN-  
ISON:—

1. THEORY AND PRACTICE. *Both semesters. W. 1:30 to 2:20.*

This is a lecture course in which the principles of medicine are dealt with. It is continuous with the corresponding course given in the fourth year.

2. QUIZ COURSE. *Both semesters. M. 10:10 to 11:00. Tu. 9:10 to 10:00. F. 11:30 to 12:20.*

This is a systematic quiz course, covering the ground of internal medicine.

Professor Peebles.

3. PHYSICAL DIAGNOSIS. *Both semesters. Th. 1:30 to 3:20.*

Lectures, recitations, and practical work. Dr. Denison.

4. CLINICAL DIAGNOSIS. *First or second semester. W. 10:10 to 12:20. F. 10:10 to 11:20.*

This course covers the practical examination, microscopically and chemically, of blood, sputum, stomach contents, urine, feces, and the various pathological excretions and secretions.

Professor Peebles.

5. ELECTRO-THERAPEUTICS. *First or second semester. Tu. W. 10:10 to 12:20.*

The course is conducted as lectures, laboratory work and clinics. The students are taught the uses of all forms of the electric current for therapeutic purposes, and are given a practical course in X-Ray photography.

Dr. Robertson.

Text-books: Edwards, \$5.50; Osler, \$5.50; Anders, \$5.50; Tyson, Cabot, \$3.50; Sahli, \$6.50; Emerson, \$5.00.

Reference books: Albutt's System, Osler's Modern Medicine, Nothnagel's Encyclopedia of Practical Medicine, (American Edition), Forchheimer's The Prophylaxis and Treatment of Internal Diseases, Da Costa, Wilson, Current Medical Literature.

## TOXICOLOGY

DR. JOLLEY:—

1. LECTURE COURSE. *Second semester.* 1 h as arranged.

The important poisons are discussed with reference to their pathology, diagnosis, treatment, and post-mortem recognition.

## SURGERY

DRS. CAMPBELL AND CLAY E. GIFFIN:—

1. MINOR SURGERY. *Both semesters.* Tu. Th. 8:10 to 9:00.

Lectures,

Dr. Campbell.

2. CADAVER SURGERY. *First semester.* Th. 9:10 to 12:20.

Under the direction of the instructor the students perform the principal operations upon the cadaver. Special attention is given to the technique of operative work. Preceding each operative procedure a thorough description of the operation together with the reasons governing its performance, is given. Quizzing is a prominent feature of this course.

Dr. Campbell.

3. OPERATIVE SURGERY. *Second semester.* Th. 9:10 to 12:20.

In this course the principle operations are performed on the dog. Special attention is given to aseptic methods, administration of anæsthetics and after treatment.

Dr. Campbell.

4. LECTURE AND QUIZ COURSE. *Both semesters.* M. W. F. 8:10 to 9:00.

This course includes operative technique, general principles of surgery, and surgery of bones and joints.

Dr. Giffin.

Text-books: Da Costa, \$5.50; Parke, Nancrede's Principles of Surgery, Senn's Principles of Surgery.

Reference books: Jacobson's The Operations of Surgery, Bryant's Operative Surgery.

## GYNECOLOGY

PROFESSOR ELDER:—

1. LECTURE COURSE. *Both semesters. M. 11:30 to 12:20.*

The didactic course is introductory to, and continuous with, the clinical course given in the fourth year. Professor Elder.

Text-books: Penroses' \$3.75; Montgomery, Hirst, Kelly, Dudley, Crossen.

## OBSTETRICS

DR. REED:—

1. OBSTETRICS. *Both semesters. M. 9:10 to 10:00.*

Covering the physiology and diagnosis of pregnancy.

Text-book: Edgar, \$6.00.

## NEUROLOGY

DR. NEUHAUS:—

1. PRINCIPLES OF NEUROLOGY. *Both semesters. W. 9:10 to 10:00.*

The lectures cover a review of the anatomy and physiology of the central nervous system, the systematology of these regions, methods of case taking, the examination of patients, etc.

Text-book: Dana, \$6.00.

## EYE, EAR, NOSE, AND THROAT

DR. SPENCER:—

1. EYE, EAR, NOSE, AND THROAT. (DEMONSTRATION COURSE). *Both semesters. M. 2:30 to 4:20.*

The students are taught the anatomy and physiology of these regions and the methods of clinical examination of normal and diseased organs.

## PATHOLOGY

PROFESSOR WHITMAN:—

1. PATHOLOGY. (POST MORTEM WORK). *First semester. Tu. 1:30 to 4:20. Second semester. W. 2:30 to 4:20. Additional hours as required.*

All students except those in the first year are required to attend all autopsies. Two students from the third year class are

assigned in rotation to conduct the examination and to dictate the protocol. In addition the same class devotes one hour a week throughout the year to lectures and recitations on special topics, and five hours or more a week to laboratory work, during which the material from the autopsies and operations is worked up by the students and presented to the class in the form of a report. Such other material is also worked up as will give the class a thorough mastery of the details of pathological technique, and will further familiarize the class with the greatest possible variety of pathological conditions.

Text-book: Ziegler, \$5.50.

Reference books: Hektoen, Stengel, MacFarland, Adami, Mallory and Wright's Pathological Technique, Current Medical Literature, etc.

#### FOURTH YEAR

##### MEDICINE

PROFESSORS EDSON, ARNEILL, CATTERMOLLE, GILBERT, AND PEEBLES,  
AND ASSISTANT PROFESSOR KENNEDY:—

1. THEORY AND PRACTICE. *Both semesters. W. 2:30 to 4:20.*

Lectures continuing the similar course given in the third year.

Professor Edson.

2. CLINICS AND CLINICAL CONFERENCES. *Both semesters. M. F. 3:30 to 5:20.*

Patients are assigned to each student who presents a detailed study of the case for discussion at a clinical conference.

Professors Arneill and Gilbert.

3. WARD WALKS. *Ten weeks. Tu. W. Th. 8:10 to 9:00.*

The class is divided into small sections for bedside instruction on the clinical cases, particular attention being paid to clinical therapeutics, and methods of clinical diagnosis.

Professors Gilbert and Peebles.

4. DISPENSARY WORK. *Ten weeks. M. Th. 8:10 to 9:00.*

This course consists in section work conducted by the students under instruction by the staff.

Professors Gilbert and Peebles.



5. CASE TEACHING. *Both semesters. W. 11:10 to 12:00.*

In this course special attention is paid not only to diagnosis, but to the therapeutic principles and remedies suited to the case under discussion.

Assistant Professor Kennedy.

6. PEDIATRICS. *Both semesters. M. 1:30 to 2:20. Th. 1:30 to 2:20.*

The course consists of lectures and clinics in which infant feeding, and the important diseases of childhood are covered.

Professor Cattermole.

Text-books: Edwards, \$5.50; Osler, \$5.50; Anders, \$5.50, Tyson, Holt, \$6.00.

Reference books: Albutt's System, Osler's Modern Medicine, Nothnagel's Encyclopedia of Practical Medicine (American Edition), Forcheimer's The Prophylaxis and Treatment of Internal Diseases, Current Medical Literature.

## THERAPEUTICS

PROFESSOR PEEBLES:—

1. CLINICAL THERAPEUTICS. *Both semesters. M. Th. 11:30 to 12:20.*

This is a lecture and quiz course on general therapeutics, including hydro-, vaccine-, serum-, organo-, climato-, and mechano-therapy, and massage.

2. DIETETICS. *Both semesters. Tu. 10:10 to 11:00.*

This is a lecture course covering the physiology of digestion, physiological and pathological metabolism, and application to specific pathological conditions.

## SURGERY

PROFESSORS GIFFIN, CRAIG, CORWIN, AND LYMAN, AND DR.

CAMPBELL:—

1. LECTURES AND CLINICS. *Both semesters. M. Tu. Th. F. 8:10 to 9:00.*

This course includes fractures and dislocations, tumors and injury to the abdomen, surgery of the breast and amputations, surgery of the intestines, liver, spleen, and pancreas, genito-urinary surgery, surgery of the head, neck, rectum, and orthopedic surgery.

Professor Giffin.

2. LECTURES AND CLINICS. *Both semesters. F. 10:10 to 12:20.*

The course includes abdominal surgery; surgery of the intestines, liver, spleen, pancreas; genito-urinary surgery, surgery of the head, neck, thorax, rectum, and orthopedic surgery.

Professor Lyman.

3. WARD WALKS. *Ten weeks. M. Tu. W. Th. 8:10 to 9:00.*

The class is divided into small sections for bedside instruction on the clinical cases, particular attention being paid to methods of diagnosis, and after-treatment of surgical cases.

Professor Giffin.

4. DISPENSARY WORK. *Ten weeks. Tu. F. 8:10 to 9:00*

The course consists in section work conducted by the students under instruction by the staff.

Professor Giffin and Dr. Campbell.

5. ABDOMINAL SURGERY; HERNIA. 1 hour per week, as arranged.  
*Second semester.*

Lectures.

Professor Corwin.

Text-books: Da Costa, \$5.50; Parke, White and Martin's Genito-Urinary Surgery, Gant's Rectal and Anal Diseases, Nancrede's Principles of Surgery, Senn's Principles of Surgery.

Reference books: Jacobson's the Operations of Surgery, Bryant's Operative Surgery.

## GYNECOLOGY

PROFESSOR ELDER AND DR. REED:—

1. LECTURES AND CLINICS. *Both semesters. M. 10:10 to 11:00.*

The course consists of didactic lectures and clinics, the latter being so arranged that the students examine and treat patients, and assist at the operations.

Professor Elder.

2. DISPENSARY. *Ten weeks. W. 2:30 to 3:20.*

The class is divided into small sections for drill in methods of gynecological and obstetrical diagnosis. (v. inf. "Obstetrics, Dispensary").

Dr. Reed.

Text-book: Penrose, \$3.75.

## OBSTETRICS

PROFESSOR TAYLOR AND DR. REED:—

1. LECTURES. *Both semesters. F. 2:30 to 3:20.*

The course includes the pathology of pregnancy, normal and abnormal labor, and the puerperium. Professor Taylor.

2. LECTURES AND CLINICS. *Both semesters. Tu. 11:30 to 12:20.*

This course consists of practice work on the manikin, and the necessary instruction connected therewith. Dr. Reed.

3. DISPENSARY. *Ten weeks. W. 2:30 to 3:20.*

The class is divided into small sections for drill in methods of gynecological and obstetrical diagnosis. (v. supra. "Gynecology, Dispensary"). Dr. Reed.

4. CLINICAL COURSE. *Irregular.*

In this course opportunity is given the students to deliver cases in person, under supervision of the attending physician. Students attend an average of five cases each. Dr. Reed.

Text-books: Edgar, \$6.00; Hirst, \$5.00.

## NEUROLOGY AND PSYCHIATRY

DRS. NEUHAUS AND DELEHANTY:—

1. PSYCHIATRY. *First semester. W. 8:10 to 9:00.*

The course covers the subject of psychiatry in lectures based on Kraepelin's text-book, and through the analysis of case histories. Dr. Neuhaus.

2. PSYCHONEUROSES AND PSYCHOTHERAPY. *Second semester. W. 8:10 to 9:00.*

Lectures and study of selected cases. Dr. Neuhaus.

3. NEUROLOGY. *Both semesters. W. 1:30 to 2:20.*

Lectures and clinics covering the organic diseases of the peripheral nerves, spinal cord, and the brain. Dr. Delehanty.

Text-books: Dana, \$6.00; Church and Peterson, Kraepelin (Dieffen-  
dendorf), Burr.

Reference books: Gowers, Oppenheim, Starr.

## OPHTHALMOLOGY AND OTOTOLOGY

PROFESSORS CHASE, JACKSON AND FOSTER, AND DR. SPENCER:—

1. LECTURES AND CLINICS. *Both semesters.* W. 7:10 to 8:00.

The course is conducted as a clinical conference, the cases being assigned to the students in rotation for diagnosis, fitting of glasses, etc. Full instruction in the use of the ophthalmoscope is also given.

Professor Chase.

2. LECTURES AND DEMONSTRATIONS. *First semester.* Th. 2:30 to 3:20.

This course includes the principles of physiological optics and refraction, the ocular movements, and the diseases of most importance in general practice.

Professor Jackson.

3. LECTURES AND CLINICS. *Second semester.* Th. 2:30 to 3:20.

This course is devoted to the study of the diseases of the ear.

Professor Foster.

4. DISPENSARY. *Ten weeks.* W. 9:10 to 11:00.

The class is divided into small sections for practical work in the diseases of the eye, ear, nose, and throat.

Dr. Spencer.

Text-books: Eye, Jackson, \$2.50; Hansell and Sweet; Ear, Roosa and Douglas, Buck, Bacon, Saunder's Hand Atlas.

## LARYNGOLOGY AND RHINOLOGY

PROFESSOR WAXHAM AND DR. SPENCER:—

1. LECTURES AND CLINICS. *Second semester.* Th. 10:10 to 11:00.

Instruction is given in the use of the laryngoscope and rhinoscope. Students assist in operations and perform minor operations under the direction of the instructor; they are also drilled in the performance of intubation.

2. DISPENSARY. *Twelve weeks.* W. 9:10 to 11:00.

The class is divided into small sections for practical work. (v. supra. "Ophthalmology and Otology, Dispensary").

Dr. Spencer.

Text-books: Ballenger, \$5.50; J. Brandon Kyle, \$4.00; John Johnson Kyle, Gleason.

## DERMATOLOGY AND GENITO-URINARY DISEASES

PROFESSOR WIEST AND DR. OLIVER LYONS:—

1. LECTURES AND CLINICS. *Both semesters. Tu. 1:30 to 3:20.*

The important diseases of the skin, and genito-urinary diseases, are covered by lectures and clinics.

Text-books: Dermatology, Crocker, Stelwagen, \$6.00; Pussey, Schamberg, Ohmann-Dumesnil; Genito-Urinary Diseases, Keyes, Gourlay.

## MEDICAL JURISPRUDENCE

DR. WHITE:—

1. LECTURE COURSE. *Second semester. 2 hours per week, as arranged.*

The lectures are designed to familiarize the student with the correct methods of dealing with medico-legal cases, and with such legal principles as will be of use in medical work.

## UNIVERSITY HOSPITAL

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The State Hospital is located on high ground overlooking the city of Boulder, having an unobstructed view of the mountains and the beautiful Boulder Valley. Being upon high ground, excellent drainage is assured. The building is heated with hot water throughout, on the plan known as the direct-indirect system. The ventilation is excellent. Every room is so located that it receives the direct rays of the sun.

There are two general wards, one for women, having ten beds; the other for men, having twenty beds. Aside from the general wards, are commodious private wards which are furnished with the purpose of presenting all the comforts of home with the added convenience of a hospital and care by skilled attendants.

The physicians for the general wards are selected from the faculty of the department of Medicine. Patients occupying the private rooms may employ any reputable physician whom they may elect. Any physician may place his patient in one of the private rooms and continue in charge of the case.

Many forms of disease are of such a nature that the patient cannot well be treated and cared for at home, or the patient may be without home care. Any such case may be sent to the Hospital, and, in the private rooms, may be cared for by his own physician if he so elects, or he will be cared for by some member of the staff, selected by the physician referring the case to the Hospital.

Clinical cases in the wards are assigned to senior students, who are held responsible for carefully working up the histories, physical examinations, laboratory diagnosis, and treatment and dressings, under the direction of members of the dispensary staff.

Ward walks are given daily to sections of the senior class by members of the dispensary staff.

A new clinical laboratory has just been installed on the ground floor of the Hospital. An adequate equipment has been supplied, and sections of the senior class are required to make careful examinations of



blood, sputum, urine, stomach contents, feces, spinal, pleural, ascetic fluids, etc., under the supervision of the director of the laboratory.

A free dispensary, located in the center of the town, is conducted by the University for teaching purposes. A section of the senior class is in daily attendance, and the students are required to take the histories, make the examinations and diagnoses, and suggest treatment under the direction of the physician in service. Here clinics in medicine, surgery, gynecology and obstetrics, pediatrics, eye, ear, nose, and throat, and genito-urinary diseases are conducted.

### HOSPITAL FEES

Fees in the Hospital are as follows:

General wards, \$12 per week for private patients, \$7 per week for clinical patients; private rooms, \$18 to \$22 per week; operating room, \$5 to \$10; special nurse, \$15 per week; medicine and dressings at cost.

# UNIVERSITY OF COLORADO TRAINING SCHOOL FOR NURSES

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The University of Colorado Training School for Nurses, which has been in successful operation for the past nine years, offers a thorough course of training to young women who desire to enter the profession of nursing. The course of instruction comprises: Practical work in the wards; theoretical work in class, and lectures; lessons in cooking; training school administration.

For admission, a certificate of moral character must be presented from two reliable persons of the place in which the applicant last resided, and a certificate of health from a physician. Evidence of at least two years' work in a high school, or equivalent, is required. The applicant must not be less than nineteen or more than thirty years of age. Applicants may be admitted at any time when a vacancy exists.

The applicant is received on probation for three months. During this period she receives room, board and a reasonable amount of laundry service. Upon the completion of the probationary period, if her work has been satisfactory to the Superintendent, she is retained as a pupil. Pupils receive \$8.00 per month. This sum is allowed for the dress, textbooks and other incidentals, but is not intended as wages. It is considered that the education given is fully equivalent for services. An annual vacation of two weeks is allowed each pupil.

Six lectures are given each week, beginning in September, and continuing until June. There is the usual intermission in lectures at Christmas.

Every applicant for graduation must possess a good moral character. She must have completed the required practical courses, and have passed satisfactory examinations in all the required studies. She must have been a regular member of the Training School for three years. For additional information, address the Superintendent, Jean McIntosh, Boulder, Colorado.

The following is the list of lecturers in the Training School:

JEAN MCINTOSH, Superintendent,  
Ethics of Nursing and Practical Work.

LUMAN M. GIFFIN, M.D.,  
Surgery and Surgical Nursing.

GEORGE H. CATTERMOLLE, M.D.,  
Diseases of Children, Infant Feeding, Children's Nursing.

OSCAR M. GILBERT, M.D.,  
Internal Medicine and General Nursing.

E. BARBER QUEAL, M.D.,  
Physiology and Materia Medica.

EDWARD B. TROVILLION, M.D.,  
Anatomy and Histology.

WALTER W. REED, M.D.,  
Obstetric Nursing.

MISS LENA ANDERSEN,  
Massage.



# SCHOOL OF LAW

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## FACULTY AND LECTURERS

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### FACULTY

JAMES H. BAKER, M.A., LL.D., President.

JOHN D. FLEMING, B.A., LL.B., Dean,  
Professor of Law; Associate Judge of Practice Court.

MOSES HALLETT, LL.D.,  
Dean and Professor of American Constitutional Law, *Emeritus*.

JOHN CAMPBELL, M.A., LL.B., LL.D.,  
Dean *Emeritus*, Professor of Law of Private and Municipal Corporations.

ALBERT A. REED, LL.B.,  
Professor of Law.

WILLIAM H. BRYANT, B.S., LL.B.,  
Professor of Law.

EDWIN VAN CISE,  
Professor of Law.

WILLIAM H. PEASE, B.A., LL.B.,  
Professor of Law.

JAMES F. WILLARD, Ph.D.,  
Professor of American and English Constitutional and Political History.

FRED G. FOLSOM, B.A., LL.B.,  
Instructor in Law; Judge of Practice Court.

JOSEPH L. KINGSBURY, B.A.,  
Instructor in History.

## LECTURERS

HUGH BUTLER,

Lecturer on Common Law Pleading.

ROBERT S. MORRISON,

Lecturer on Law of Mines and Mining.

CHARLES S. THOMAS, LL.B.,

Lecturer on Law of Evidence.

LUCIUS M. CUTHBERT, M.A., LL.B.,

Lecturer on Roman Law.

JOHN A. RINER, LL.B.,

Lecturer on International Law.

RALPH TALBOT, B.A.,

Lecturer on Criminal Law and Procedure.

CHARLES D. HAYT,

Lecturer on Law of Taxation.

CÆSAR A. ROBERTS, M.A.,

Lecturer on Colorado Civil Code.

WILLARD J. WHITE, M.A., M.D.,

Lecturer on Medical Jurisprudence.

ERNEST L. WILLIAMS, LL.B.,

Lecturer on Appellate Procedure

JAMES W. McCREERY,

Lecturer on Law of Irrigation and Water Rights.

JOHN E. ROBINSON,

Lecturer on Bankruptcy.

A. ELMER STIRRETT,

Librarian.

WILLIAM B. WALDO,

Assistant Librarian.

OLIVER C. WILSON,

Assistant Librarian.

ARTHUR W. FITZGERALD,

Clerk of the Practice Court.

JOHN S. STIDGER,

Stenographer.



# SCHOOL OF LAW

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## STATEMENT

The Law School was opened in September, 1892. The course of study covers three years of thirty-six weeks each. The school is a member of the Association of American Law Schools.

## BUILDING

The School of Law is now occupying its new building. This building contains commodious class rooms, professors' rooms, a moot court room, and a large room for the library. It is the gift of Senator Simon Guggenheim.

## ACADEMIC YEAR

The Academic Year, 1910-1911, will begin on Monday, September 12, 1910.

## ADMISSION

Candidates for a degree must not be less than eighteen years of age upon entering the freshman class. All applicants for admission must present certificates of good moral character.

See page 54 for requirements.

## ADVANCED STANDING

Admission to advanced standing will be allowed to candidates, if otherwise entitled to admission to the School as regular students, who satisfy the faculty that they have made sufficient progress in the study of law. Examinations for advanced standing will be held at the University on Monday, September 12, 1910.

## SPECIAL STUDENTS

Candidates twenty-one years of age, who cannot satisfy the admission requirements, but are qualified to pursue special work, may be admitted to certain courses with the approval of the Law Faculty.

## DEGREE OF BACHELOR OF LAWS

The degree of Bachelor of Laws will be conferred on students who have passed all the examinations of the entire course. The candidate for a degree must have pursued at least one year's course as a resident student. No degree will be conferred until the candidate shall have reached the age of twenty-one years.

## DEVELOPMENT OF THE AMERICAN LAW SCHOOL

Legal education in this country has come to be a matter of law-school instruction. For many years the number of students in law offices has decreased; practicing lawyers have gradually given less and less attention to the instruction of students in their offices. Meanwhile the number of law schools and the number of students in law schools have rapidly increased.

In 1878 there were fifty schools with 3,012 students. According to the report of the Committee on Legal Education and Admission to the Bar of the American Bar Association, presented at the meeting at Portland, Maine, August, 1907, there were then one hundred and nineteen law schools; the number of students therein was, in 1906, 15,411.

Law schools have not only increased in number and in students, but they have made very general and marked advancement in requirements for admission, and for graduation; in the prescribed course of study; and in methods of instruction. The one-year law school has become constantly rarer and at the time of the above report there were only two remaining in the United States. Now most schools of good standing require at least college matriculation, or its equivalent, as a condition of admission; prescribe a course of study covering three years and occupying all the student's time; and grant the LL.B. degree only after a rigid and searching examination.

## METHOD OF INSTRUCTION

As to methods of instruction, no subject connected with legal education has been the occasion of so much controversy. Three distinct plans are found in use in different institutions:

(a) That most generally adopted may be called the text-book method, and consists of class-room recitations and quizzes upon assigned portions of a legal treatise.

(b) What is known as the "Case-System," as understood and taught at Harvard, originated there more than a quarter of a century ago, and although not in general use, has been gradually adopted to a greater or less extent in a number of the best law schools. It consists of the inductive study of carefully arranged and selected cases. It does not exclude the use of texts and commentaries on the law, by the student in his individual research, but requires no use of them for class-room work.

(c) The teaching of law by lectures has the authority of age, and has been pursued in the profession for hundreds of years, certainly as far back as the reign of Elizabeth, when there were "readers," very important officials, who gave instruction, both in the inns of court, and in the inns of chancery. This plan was pursued in this country also by Judge Wilson of Pennsylvania in 1790 and 1791, afterwards by Chancellor Kent of New York, by the Litchfield Law School, and in the early days of Harvard. At a later period it fell somewhat into disuse and seemed about to be abandoned. Recently it has been regaining lost ground.

Each of these methods has its advantages and limitations, and each its earnest advocates.

Though text-book recitations have been entirely abandoned in some of the best law schools, it may well be doubted whether, by any other means, the beginner in legal studies can so quickly acquire an accurate and systematic knowledge of legal principles as by the study of the *best*, and only the best, text-books and commentaries. Were that the sole object of the student, there could be no better method. The purpose, however, of legal study, is to make a lawyer, and the mere knowledge of legal principles falls far short of converting the law student into a lawyer. In addition, there must be a marked development in the man himself; he must learn to think independently, to weigh authorities, to deduce principles from adjudications, to carefully discriminate in

their application, to appreciate the *ratio decidendi*. In no other way can he make the intellectual stride so surely as by careful study and analysis of well-selected precedents, followed by earnest class-room discussion and debate, presided over by the instructor, upon the application of the principles involved. In such work the student's mental attitude is active and largely that of an independent investigator. Each step requires thought, actual mental effort, and so results in mental development. His work is done with a sense of responsibility, and so is thorough. He becomes inured to an atmosphere of mental antagonism and criticism, and soon learns to defend his position with good temper and some skill, and perhaps, to detect the flaw in his opponent's argument. Step by step he is growing into a lawyer. Such, fairly considered, are the merits of the "Case System." Perhaps its advantages can be best derived by a student who has been previously prepared for such work by the study of good text-books.

The law lecture, which has so well withstood the test of time, is not to be ignored or depreciated. When delivered by a really eminent specialist, a man of magnetic and intellectual force, it brings both legal principles and reasoning home to the mind of the attentive student, with a vividness and force that stimulates his thought and vitalizes his reading. The personality of the lecturer, and the previous training of the student are all important factors of success.

These considerations have induced the Faculty of the Colorado School of Law to adopt a scheme of instruction which involves the employment of all three systems. Much of the first year's work consists of class-room recitations from standard text-books; some time is given to lectures; and the student makes his first trial of case study, the work being limited in amount and graduated to the progress of the class. In the second year, the bulk of the work is done with cases, though text-books and lectures are not altogether disused. In the third year, cases are still used, but the proportions are reversed. There are a few courses of case work, text-books being disused in the class-room, and many courses of lectures. These are delivered by some of the most eminent members of the profession in Colorado, to students who have been prepared and seasoned by two years' hard study of text-books and cases.

Thus the scheme of instruction is composite, and designed to secure a maximum of the excellence while accompanied by a minimum of the faults of each of the three methods.

## COURSE OF STUDY

It is the purpose of the School to afford such training in the fundamental principles of the English and American law as will thoroughly prepare the student to practice his profession with credit in any state or country where this law prevails.

The course of study occupies the student three years of nine months each, and is so arranged as to require a minimum of fifteen hours of actual recitations and lectures each week from each class. The prescribed course comprises the subjects that follow:

## FIRST YEAR.

1. CIVIL PROCEDURE AT COMMON LAW. Professor Fleming.  
Martin on Civil Procedure; Keen's cases.
2. CRIMINAL LAW AND PROCEDURE. Professor Reed.  
May's Criminal Law; Chapin's Cases.  
Lectures at appointed hours by Mr. Ralph Talbot.
3. CONSTITUTIONAL HISTORY OF ENGLAND. Professor Willard.
4. CONTRACTS. Professor Pease.  
Hammon on Contracts, and selected cases.
5. ELEMENTARY LAW. Professor Pease.  
Blackstone's Commentaries.
6. PERSONAL PROPERTY. Professor Reed.  
Shouler on Personal Property.
7. POLITICAL AND CONSTITUTIONAL HISTORY OF THE UNITED STATES.  
Professor Willard.
8. REAL PROPERTY. Professor Pease.  
Tiffany on Real Property.
9. TORTS. Professor Reed.  
Cooley on Torts; Burdick's Cases on Torts.

## SECOND YEAR.

1. AGENCY. Professor Fleming.  
Huffcutt's Cases on Agency, 2nd Edition.
2. BAILMENTS AND CARRIERS. Professor Folsom.  
Hale on Bailments and Carriers.  
Selected and Colorado Cases.

3. **BILLS AND NOTES.** Professor Reed.  
Bigelow on Bills and Notes; Bigelow's Cases on the Law of Bills, Notes and Checks. Colorado Negotiable Instruments Law.
4. **CIVIL PROCEDURE UNDER THE CODE.** Professor Van Cise and Mr. Cæsar A. Roberts.  
Colorado Code of Civil Procedure and Selected Cases. Lectures at appointed hours.
5. **DAMAGES.** Professor Reed.  
Sedgwick's Elements of Damages.
6. **DOMESTIC RELATIONS.** Professor Reed.  
Woodruff's Cases on Domestic Relations.
7. **EVIDENCE.** Professor Pease.  
Reynolds on Evidence; Thayer's Cases on Evidence.  
Lectures also delivered on this subject by Mr. Charles S. Thomas.
8. **EQUITY JURISPRUDENCE.** Professor Pease.  
Bispham's Principles of Equity and Selected Cases.
9. **EQUITY PLEADING AND PRACTICE.** Professor Pease.  
Fletcher's Equity Pleading and Practice.
10. **PLEADING AND PRACTICE UNDER THE CODE.** Professor Folsom.  
This course covers the work in the Practice Court described below.
11. **REAL PROPERTY.** Professor Pease.  
Gray's Cases on Property.  
Tiffany on Real Property.
12. **QUASI-CONTRACTS.** Professor Reed.  
Selected Cases.

#### THIRD YEAR.

1. **APPELLATE PRACTICE.** Mr. Ernest L. Williams.  
Lectures at appointed hours; illustrative cases.
2. **COMMON LAW PLEADING.** Mr. Hugh Butler.  
Lectures at appointed hours.
3. **CONSTITUTIONAL LAW.** Professor Fleming.  
Constitutional Law in U. S., McClain; McClain's Cases, 2d Edition.  
Also lectures at appointed hours by Judge Hallett.



4. CONFLICT OF LAWS. Professor Fleming.  
Minor's Conflict of Laws; selected cases.
5. CONVEYANCING AND ABSTRACTS OF TITLE. Professor Pease.  
Lectures at appointed hours.
6. CORPORATIONS. Professor Reed.  
Warren's Cases on Private Corporations.  
Lectures on Private and Municipal Corporations at appointed hours by Hon. John Campbell.
7. INTERNATIONAL LAW. Hon. John A. Riner.  
Lectures at appointed hours.
8. EXTRAORDINARY REMEDIES. Professor Van Cise.  
Colorado Code Civil Procedure. Selected Cases.
9. INSURANCE. Professor Fleming.  
Lectures at appointed hours. Illustrative cases.
10. IRRIGATION, WATER RIGHTS AND RIPARIAN PRIVILEGES. Professor Fleming.  
Mills' Irrigation Manual.  
Mr. James W. McCreery lectures at appointed hours.
11. LEGAL ETHICS. Hon. John A. Riner.  
Lectures at appointed hours.
12. MEDICAL JURISPRUDENCE. Dr. Willard J. White.  
Lectures at appointed hours.
13. MINES AND MINING. Professor Bryant and Professor Fleming.  
Selected Cases; Morrison's Mining Rights.  
Mr. Robert S. Morrison lectures at appointed hours.
14. MUNICIPAL CORPORATIONS. Professor Reed.  
Smith's Cases on Municipal Corporations.
15. PARTNERSHIP. Professor Reed.  
Mechem on Partnerships.
16. PLEADING AND PRACTICE UNDER THE CODE. Professor Folsom.  
This course covers the work in the Practice Court described below.
17. REAL PROPERTY. Professor Pease.  
Gray's Cases on Property; Tiffany on Real Property.
18. SALES. Professor Fleming.  
Williston's Cases on Sales of Personal Property. 2d Edition.

19. TAXATION. Mr. Charles D. Hayt.  
Lectures at appointed hours.
20. TRUSTS. Professor Van Cise.  
Selected Cases.
21. WILLS, EXECUTORS AND ADMINISTRATORS. Professor Fleming.  
Bates' Cases on Wills; 'Colorado Wills and Administration Act of 1903, and selected cases.
22. ROMAN LAW. Mr. Lucius M. Cuthbert.  
Lectures at appointed hours.
23. MENTAL ALIENATION.  
Lectures at appointed hours.
24. BANKRUPTCY. Mr. John E. Robinson.  
Lectures and selected cases.
25. BRIEF MAKING AND USE OF LAW BOOKS. Mr. Fred G. Folsom.  
Abbott.  
This course covers work in Moot and Practice Court mentioned below.

### TEACHING PRACTICE

The transfer of legal education from the office to the law school has been marked by a great gain in thoroughness and fullness. But the loss of the training in practice afforded by the business of the office is much to be regretted. It provided the student a sort of law clinic, the want of which must now be supplied by the law school if his legal education is to be complete. He must not only be taught the principles of procedure in all its branches, jurisdiction, pleading, evidence, trial and appellate relief, but he should see these principles in actual practical application. To some extent he may do this by attendance upon the courts and close observation and study of the proceedings there. But, beside being a silent spectator in public courts, the student should have a court of his own, where he may devise remedies, sue out process, draw pleadings, prepare instructions, make briefs and argue questions of law—and perhaps of fact—frame record entries, save exceptions, and preserve them in the record, and take the case up on error, or by appeal. To supply this need, the Regents of the University have authorized a Practice Court, presided over by a Professor of Practice. A court room, in-

cluding a Clerk's office, has been provided; and the records and files are kept and the proceedings of the court conducted in conformity with usage and practice in the District Courts in Colorado.

The following, briefly stated, is the course of procedure: The Second-Year Class and Third-Year Class are divided into groups of four students; to each group is assigned a carefully prepared case, the facts of which are so stated as, when properly pleaded, to present an issue of law; two of the group are counsel for plaintiff and two for defendant. Counsel for plaintiff devise the remedy, sue out process, superintend its proper service and draw the complaint. Defendant's counsel may demur, move to strike out, or to make more definite and certain, or to quash the process, or plead, as they see fit. Every step, however, is subject to the supervision of the Professor of Practice, and he may require errors to be corrected at once, or leave them in his discretion, to the attention of the opposing counsel. Every record entry occasioned by any step taken by counsel must be drafted by them and submitted to the clerk. He requires the correction of any error or insufficiency, and the entry is then made upon the record by a deputy clerk, selected from the students. When the case is at issue, it is set for trial, or hearing before the Professor of Practice sitting as Judge of the Practice Court. In proper cases appeal is allowed to a court specially organized for the purpose.

It is intended that each student shall participate in the conduct to final judgment, of at least three cases, in each of the second and third years of his course.

## INSTRUCTION IN OTHER DEPARTMENTS OF THE UNIVERSITY

The instruction given in other departments of the University is open also to students of the Law School, subject to the approval of the law faculty. Among the numerous courses, those upon Political Economy, Geology, Mineralogy, History, Oratory and Debate, are particularly recommended for law students.

## THE LIBRARY

The University Library, open to students of all departments, contains 52,000 bound volumes.

The Law Library contains several sets of English and American reports, the digests, including the Century Digest, and a well-selected collection of text-books, and is increased each year under special appropria-

tions by the Regents for that purpose. Several of the leading law journals, American and English, are regularly taken and are on file.

The students of the Law School, although they will not be allowed to take books from the law library of the Supreme Court of the State at Denver, will be allowed free access during hours when the library is open.

The members of the Boulder bar have generously granted the use of their libraries to students of the School.

### FEES

Students pay an annual tuition fee of \$50.

### ADDITIONAL INFORMATION

For further information inquire of

JOHN D. FLEMING,

Dean, Colorado School of Law.

*Boulder, Colorado.*

## SUMMER SESSION

The seventh Summer Session opens June 20 and closes July 30, 1910. Instruction by specialists will be given in all collegiate departments. Besides the advantages of the formal courses, open lectures of general and special interest will be given during the summer session.

The faculty will consist of regular members of the University staff and professors from other institutions of equal rank. The standard of the work will be the same as that maintained during the regular academic year, and credits toward a degree will be given for courses satisfactorily completed.

A fee of \$10 will be charged for a single course, and \$15 for two or three courses.

Full information regarding the summer work is published in the regular Summer Session Bulletin. For this apply to the Secretary of the University, Boulder, Colorado.





# CATALOGUE OF STUDENTS

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## GRADUATE SCHOOL

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### NAME.

### UNIVERSITY RESIDENCE.

- Alden, Clara Louise, B.A., M.A.....Worcester, Mass.....1121 13th St.  
Wellesley College, 1897; University of Colorado, 1907.  
Psychology, Sociology, Economics.
- Allis, Frederick Scouller, B.A.....Erie, Pa.....Boulderado  
Amherst College, 1893.  
History.
- Baker, Frances Elizabeth, B.S.....Carthage, Mo.....1135 Broadway  
Northwestern University, 1900.  
Comparative Literature, English Literature.
- Bell, Cleophile, B.A., M.A.....Boulder, Colo.....1931 Hill St.  
University of Colorado, 1908, 1909.  
Comparative Literature, English Literature, German.
- Bennetts, Richard, B.S. (C.E.).....Denver, Colo.  
University of Colorado, 1908.  
Railroad Engineering.
- Berggren, Axel Emanuel, B.S. (M.E.)..Marshalltown, Ia..1133 Pleasant  
Iowa State College, 1908.  
Mechanical Engineering.
- Berkeley, Sylvia, B.A.....Boulder, Colo.....2124 Walnut St.  
University of Colorado, 1904.  
English, Education.
- Blakey, Roy G., B.Ph.....Boulder, Colo.....972 14th St.  
Drake University, 1905.  
Economics.
- Blodgett, Charla Anna, B.A.....American Lake, Wash....1045 12th St.  
University of Washington, 1902.  
Education, Psychology.

| NAME.                                                      | UNIVERSITY RESIDENCE.                                                                                                    |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Boehm, Gustavus Henriettus, Pd.B., B.A...Hermann, Mo...    | 932 15th St.<br>State Normal School of Missouri, 1902; University of<br>Missouri, 1908.<br>Sociology, Law.               |
| Borden, Edmund Gilbert, B.S. (Ch.E.) ..Boulder...          | 1013 Portland Place<br>University of Colorado, 1909.<br>Civil Engineering.                                               |
| Boswell, Fannie Judith.....Parker, Colo.....               | 1040 University St.<br>Great Drama, English, Shakespeare.                                                                |
| Brackett, William Raymond, B.A....Boulder, Colo.....       | 2455 12th St.<br>University of Colorado, 1905.<br>Physics, Electrical Engineering.                                       |
| Brandenberg, George Clinton, B.Pe...Boulder, Colo..        | 2011 Arapahoe Ave.<br>Drake University, 1906.<br>German, Economics.                                                      |
| Brandenberg, Julia Elmida, B.A....Boulder, Colo...         | 2011 Arapahoe Ave.<br>University of Iowa, 1906.<br>German.                                                               |
| Brown, Grace Mary, B.L.....Detroit, Mich.....              | Woman's Building<br>Alma College, 1909.<br>Sociology, Tennyson.                                                          |
| Brush, Elizabeth Parnham, B.A...Boulder Colo..             | 1027 Pennsylvania Ave.<br>Smith College, 1909.<br>History, Comparative Literature.                                       |
| Butters, Roy M., B.A.....Denver, Colo.....                 | 1307 College Ave.<br>University of Colorado, 1909.<br>Geology.                                                           |
| Carhart, Margaret Sprague, B.A., M.A....Boulder, Colo...   | 1510 13th St.<br>University of Michigan, 1899, 1901.<br>English History, Rhetoric, Comparative Literature.               |
| Craig, Ollison, B.S. (M.E.) .....Boulder, Colo.....        | 1143 Portland Place<br>University of Illinois, 1909.<br>Mechanical Engineering.                                          |
| Currens, Gertrude F., B.Ph., M.A.....Boulder, Colo.....    | 973 14th St.<br>University of Colorado, 1900, 1908.<br>Literature, Sociology.                                            |
| Currens, Jesse Wilson, B.A., B.D., M.A....Boulder, Colo... | 973 14th St.<br>Lake Forrest, 1894; McCormick Seminary, 1897;<br>University of Colorado, 1908.<br>Literature, Sociology. |

| NAME.                                                      | UNIVERSITY RESIDENCE.                        |
|------------------------------------------------------------|----------------------------------------------|
| Curtis, Harry Alfred, B.S. (Ch.E.) . .                     | Castle Rock, Colo. . . 1024 Univ. St.        |
| University of Colorado, 1908.                              |                                              |
| Chemistry, Physics.                                        |                                              |
| Dendahl, Henry, B.S. (C.E.) . . . . .                      | Santa Fe, N. M. . . . . 1125 Pleasant St.    |
| University of Colorado, 1909.                              |                                              |
| Mineralogy, Economics.                                     |                                              |
| Dier, Katherine Emma, B.A. . . . .                         | Golden, Colo. . . . . 1229 13th St.          |
| University of Colorado, 1909.                              |                                              |
| Great Drama, Comparative Literature, Philosophy.           |                                              |
| Doolittle, Frederick W., B.A., B.S. (C.E.) . .             | Hopkinton, Ia. . 1148 11th St.               |
| Princeton, 1905; University of Colorado, 1907.             |                                              |
| Civil Engineering.                                         |                                              |
| Egglee, Edward Percy, B.A. . . . .                         | Flushing, N. Y. . . . . 1162 12th St.        |
| University of Colorado, 1909.                              |                                              |
| Philosophy, Tennyson.                                      |                                              |
| Elden, Laeta, B.A. . . . .                                 | Boulder, Colo. . . . . 1034 Pine St.         |
| University of Colorado, 1901.                              |                                              |
| Comparative Literature, History, Philosophy.               |                                              |
| Falk, Louise Henriette, B.A. . . . .                       | Davenport, Ia. . . . . 1638 Grove St.        |
| University of Iowa, 1909.                                  |                                              |
| Botany, Zoology.                                           |                                              |
| Field, Georgia Louise, B.A., M.A. . . . .                  | Hillsboro, Mass. . . . . 973 14th St.        |
| Smith College, 1903; University of Colorado, 1909.         |                                              |
| Comparative and English Literature.                        |                                              |
| Fitterer, John Conrad, B.S. (C.E.), B.S. . . . .           | Laramie, Wyo. . . . .                        |
| University of Colorado, 1904; Ohio State University, 1898. |                                              |
| Civil Engineering.                                         |                                              |
| Gay, George Inness, B.S. (C.E.) . . . .                    | Mt. Vernon, N. Y. . . . . 1148 11th St.      |
| University of Colorado, 1909.                              |                                              |
| Civil Engineering.                                         |                                              |
| Giffin, Floye Lewis, B.A. . . . .                          | Boulder, Colo. . . . . 1040 Mapleton Ave.    |
| University of Colorado, 1905.                              |                                              |
| German.                                                    |                                              |
| Gillaspie, Carbon, M.D. . . . .                            | Boulder. . . . . 2629 Pine St.               |
| University of Colorado, 1905.                              |                                              |
| Psychology.                                                |                                              |
| Green, Catherine Mary. . . . .                             | Sioux City, Ia. . . . . 1301 Grand View Ave. |
| Education, Psychology.                                     |                                              |
| Green, Julia L. . . . .                                    | Sioux City, Ia. . . . . 1325 Broadway        |
| Education, Literature, Romance Languages.                  |                                              |

| NAME.                                                     | UNIVERSITY RESIDENCE.                                                                                 |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Gutberlet, John Earl, B.A.....Hardy, Neb.....             | 1509 Arapahoe Ave.<br>Bethany College, 1909.<br>Zoology, Botany.                                      |
| Harootunian, Hampartsoom H. Der, B.A....Van, Armenia..... | 1104 University St.<br>Colorado College, 1909.<br>Physics, Mathematics.                               |
| Hartman, Henry Allen, B.A., Ph.D....Boulder, Colo.....    | 977 9th St.<br>Valparaiso University, 1887; Alabama State Normal, 1895.<br>Psychology, Education.     |
| Henderson, Junius, B.A.....Boulder, Colo.....             | 627 Pine St.<br>University of Colorado, 1907.<br>Paleontology, Geology, Biology.                      |
| Hoelscher, Geneva Algetha, B.S.....Boulder, Colo.....     | 865 12th St.<br>Cornell College, 1893.<br>Comparative and English Literature, Psychology.             |
| Hudson, Eliza Christian, B.A.....Denver, Colo.....        | Boulderado<br>University of Colorado, 1909.<br>Mathematics, Psychology.                               |
| Hughes, Mary Mildred, B.A.....Pueblo, Colo.....           | 1040 11th St.<br>University of Colorado, 1907.<br>Education, Psychology.                              |
| Jackson, Bethell Howard, M.E., M.A....Boulder, Colo....   | 1036 14th St.<br>Stephens Institute of Technology, 1895; University of<br>Colorado, 1906.<br>Geology. |
| Jackson, Ellen Christina, B.Di., B.A....Red Oak, Ia.....  | 1567 9th St.<br>Iowa Teachers' College, 1901; University of Colorado, 1909.<br>Latin, Greek.          |
| Jacobucci, Joseph Harry, B.S. (E.E.)....Rawlins, Wyo.     | University of Colorado, 1908.<br>Electrical Engineering.                                              |
| Jones, Easley Stephen, B.A., M.A....Boulder, Colo.....    | 2141 Water St.<br>University of Colorado, 1907, 1909.<br>English Language and Literature, Philosophy. |
| Jones, Laurence Dean, B.S. (E.E.)....Boulder, Colo.....   | 2037 16th St.<br>University of Colorado, 1909.<br>Electrical Engineering.                             |
| Jordan, Leonard Crouch, B.S. (C.E.)....Mercersburg, Pa.   | University of Colorado, 1906.<br>Civil Engineering.                                                   |

| NAME.                                      | UNIVERSITY RESIDENCE.                                                                                                        |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Kelley, James Bernard, M.E.....            | Seranton, Pa.....1119 Broadway<br>Cornell University, 1905.<br>Electrical Engineering.                                       |
| Kennedy, Rose Elizabeth, B.A.....          | Denver, Colo.....2412 Hill St.<br>University of Colorado, 1909.<br>German, English Literature, Comparative Literature.       |
| Kesner, Harry James, B.A., B.S. (C.E.).... | Berkeley, Cal.<br>University of Colorado, 1905, 1907.<br>Civil Engineering.                                                  |
| King, Clyde L., B.A., M.A.....             | Emporia, Kan.....1133 Pleasant St.<br>University of Michigan, 1907, 1908.<br>Sociology.                                      |
| Kingsbury, Joseph Lyman, B.A.....          | Ventura, Cal.....820 Concord Ave.<br>Dartmouth College, 1905.<br>History.                                                    |
| Knowles, Robert Reily, B.S. (Ch.E.)....    | Denver, Colo.....1105 11th St.<br>University of Colorado, 1909.<br>Chemistry.                                                |
| LaDow, Ruth, B.A., M.A.....                | Fredonia, Kan.....1134 Pleasant St.<br>Randolph Macon Woman's College, 1908; Leland Stanford<br>University, 1909.<br>German. |
| Lakenan, Mary Emily M.....                 | Boulder, Colo.....956 Marine St.<br>Psychology, Comparative Literature.                                                      |
| Lauer, Arnold William, B.Ph.....           | Norman, Okla.....1012 14th St.<br>University of Iowa, 1904.<br>Geology, Chemistry.                                           |
| Logan, Hal Helm, B.S. (C.E.).....          | Hannibal, Mo.<br>University of Colorado, 1908.<br>Civil Engineering.                                                         |
| Macaulay, Frederick Robertson, B.A....     | Montreal, Can.....1100 Penn. St.<br>University of Colorado, 1909.<br>Economics, Law.                                         |
| McArthur, Mildred Sherwood, B.A., M.A....  | Troy, N. Y....1107 13th St.<br>Cornell University, 1908, 1909.<br>German Literature, Icelandic.                              |
| McNutt, Mildred Margaret, B.A.....         | Boulder, Colo.....983 14th St.<br>University of Colorado, 1909.<br>Education.                                                |

| NAME.                                     | UNIVERSITY RESIDENCE.                                                                                |
|-------------------------------------------|------------------------------------------------------------------------------------------------------|
| Millard, Earl Bowman.....                 | Boulder, Colo.....1915 Pine St.<br>Chemistry.                                                        |
| Moore, Evelyn Viola, B.A.....             | Longmont, Colo.....1611 Grove St.<br>University of Colorado, 1908.<br>Biology.                       |
| Murdock, Harvey, B.S., M.E.....           | Champaign, Ill.<br>University of Colorado, 1906, 1908.<br>Civil Engineering.                         |
| Perkins, Merritt Holden.....              | Greenfield, Mass.....720 Pine St.<br>Sociology.                                                      |
| Reever, Alice May, B.A.....               | Glidden, Iowa.....17th and Grove Sts.<br>University of Iowa, 1909.<br>English, Tennyson.             |
| Reynolds, William LeRoy, B.S. (C.E.)..... | Denver, Colo.<br>University of Colorado, 1909.<br>Civil Engineering.                                 |
| Robbins, Wilfred William, B.A., M.A....   | Boulder, Colo.....<br>University of Colorado, 1907, 1908. 1220 Grand View Ave.<br>Botany, Zoology.   |
| Shelton, Whitford Huston, B.Ph.....       | Indianola, Iowa.....2129 13th St.<br>Simpson College, 1905.<br>Romance Languages, English.           |
| Shufelt, Gladys Elizabeth, B.S.....       | Boulder, Colo.....R. F. D. No. 2<br>Union College, Nebraska, 1907.<br>Mathematics, Chemistry.        |
| Skinner, James Dudley, B.Ph.....          | Denver, Colo.<br>Yale University.<br>Mechanical Engineering.                                         |
| Smith, Guy Watson, B.S. (E.E.), M.S....   | Castle Rock, Colo.....<br>University of Colorado, 1908, 1909. 1045 Pennsylvania Ave.<br>Mathematics. |
| Sovereign, Harry E., B.S. (C.E.).....     | Palisade, Colo.<br>University of Colorado, 1908.<br>Civil Engineering.                               |
| Stoddard, William S., B.A.....            | Boulder, Colo.<br>University of Colorado, 1908.<br>Education, Psychology.                            |
| Sullivan, George Leonard, B.S. (M.E.)..   | Jackson, Neb..1133 Pleasant St.<br>University of Nebraska, 1908.<br>Mechanical Engineering.          |



## NAME.

## UNIVERSITY RESIDENCE.

- Sweeney, Grace Marie, B.A.....Denver, Colo.....1052 12th St.  
Vassar College, 1907.  
English Language.
- Tourtellotte, Louise Lucretia.....Denver, Colo.....1229 13th St.  
Botany.
- Venables, Raymond Joseph.....Boulder, Colo.....1037 12th St.  
History.
- Waltemeyer, Frances Barrett, B.A....Boulder, Colo.....1005 12th St.  
University of Colorado, 1909.  
German, Romance Languages.
- Wheeler, Margaret Love, B.A., M.A...Boulder, Colo...1133 G. View Ave.  
Wellesley, 1898; University of Colorado, 1908.  
English, History.
- Woods, Harland Clark, B.S. (C.E.)..Weeping Water, Neb.....  
University of Nebraska, 1909. 1133 Pleasant St.  
Civil Engineering.
- Worcester, Philip George, B.A.....Thetford, Vt.....1065 11th St.  
University of Colorado, 1909.  
Geology.

# COLLEGE OF LIBERAL ARTS

## SENIOR CLASS

| NAME AND HOME RESIDENCE.                       | UNIVERSITY RESIDENCE. |
|------------------------------------------------|-----------------------|
| Armor, William Roy.....<br>Denver.             | Men's Dormitory       |
| Bearss, Bessie Bertyne.....<br>Boulder.        | 540 Marine St.        |
| Belser, Louise Hulda.....<br>Boulder.          | 1107 13th St.         |
| Berg, Anna Matilda.....<br>Fruita.             | 944 Regent St.        |
| Betts, Edna Sara.....<br>Mount Pleasant, Iowa. | 1229 13th St.         |
| Bone, Amy Ethel.....<br>Lafayette, Indiana.    | 1085 12th St.         |
| Boyd, Byron Bennett.....<br>Denver.            | 1205 13th St.         |
| Brooks, Clara Edwina.....<br>Denver.           | 1221 University St.   |
| Broome, Lenore Catherine.....<br>Pueblo.       | 1221 University St.   |
| Bunyan, Ellen Thomas.....<br>Berthoud.         | 1165 12th St.         |
| Caldwell, Ethel Ada.....<br>Gunnison.          | 1134 Pleasant St.     |
| Callahan, Helen Matt.....<br>Aspen.            | 1107 10th St.         |
| Callaway, William Otis.....<br>Pueblo.         | 1155 13th St.         |
| Carr, Ralph Lawrence.....<br>Cripple Creek.    | 1441 12th St.         |
| Clarke, Grace.....<br>Boulder.                 | 2126 Walnut St.       |
| Cody, Sadie Theresa K.....<br>Central City.    | 829 University St.    |
| Coulehan, Annie Carroll.....<br>Boulder.       | 701 Spruce St.        |
| Crary, Ruth Naomi.....<br>Gunnison.            | 1445 17th St.         |

| NAME AND HOME RESIDENCE.                                    | UNIVERSITY RESIDENCE. |
|-------------------------------------------------------------|-----------------------|
| DesBrisay, Helen Gertrude.....<br>Cripple Creek.            | 2053 Hill St.         |
| DeWeese, Eva Della.....<br>Emporia, Kansas.                 | 1567 9th St.          |
| Donovan, Alice Louise.....<br>Longmont.                     | 1233 Broadway         |
| Doyle, Bessie Helen.....<br>Saguache.                       | 1155 10th St.         |
| Dumbauld, Flora.....<br>Las Animas.                         | 1121 13th St.         |
| Dunham, Clifford Scott.....<br>Dunlap, Iowa.                | 1010 Marine St.       |
| Ellis, Erl Hubert.....<br>Denver.                           | 1830 16th St.         |
| Ellmaker, Sarah Elizabeth.....<br>Los Angeles, California.  | 1128 Pine St.         |
| Epperson, Nellie Marie.....<br>Aspen.                       | 1107 10th St.         |
| Faus, Frankie.....<br>Boulder.                              | 1443 Spruce St.       |
| Fitts, Levi Nathaniel, Jr.....<br>Brookline, Massachusetts. | 1441 12th St.         |
| Fletcher, Neora Estella.....<br>Grand Junction.             | Woman's Cottage       |
| Foote, Frances Desiree.....<br>Como.                        | 947 University St.    |
| Ford, Ethel Rosine.....<br>Boulder.                         | 404 Marine St.        |
| Fulton, John Hayes.....<br>Pueblo.                          | 1229 13th St.         |
| Gladden, Josephine Ione.....<br>Grand Junction.             | 1165 12th St.         |
| Goldsworthy, Flora Ethelyn.....<br>Boulder.                 | 1044 12th St.         |
| Green, Julia Lucile.....<br>Sioux City, Iowa.               | 1325 Broadway         |
| Grigsby, Geneva.....<br>Blandinsville, Illinois.            | 940 15th St.          |
| Hagman, Josephine Barbara.....<br>Boulder.                  | 2705 12th St.         |
| Hamilton, Lloyd Leslie.....<br>Denver.                      | 1448 11th St.         |
| Harris, Ilah Marie.....<br>Buena Vista.                     | Woman's Cottage       |
| Hedgecock, Charles Gordon.....<br>Las Vegas, New Mexico.    | 1121 University St.   |
| Hills, Mary Louise.....<br>Denver.                          | 1113 10th St.         |

| NAME AND HOME RESIDENCE.                                   | UNIVERSITY RESIDENCE. |
|------------------------------------------------------------|-----------------------|
| Hoffmaster, Helen Creighton.....<br>Leadville.             | 475 Marine St.        |
| Hubbard, Martha Josephine.....<br>Denver.                  | 1327 Arapahoe Ave.    |
| Hunting, Bertha Harriett.....<br>Boulder.                  | 2213 Hill St.         |
| Lakenan, Mary Emma McCue.....<br>Boulder.                  | 956 Marine St.        |
| Lamb, Anna Mabel.....<br>Boulder.                          | 1636 Spruce St.       |
| Leatherman, Margaret .....<br>Lamar.                       | 1061 12th St.         |
| Lewis, William Benjamin.....<br>Louisville.                | City Y. M. C. A.      |
| Lichty, Carl Tobias .....<br>Bethlehem, Pennsylvania.      | 1145 13th St.         |
| Martin, Fina Lois.....<br>Hamilton, Missouri.              | 1131 University St.   |
| Millard, Earl Bowman .....<br>Boulder.                     | 1915 Pine St.         |
| Moore, Rachel .....<br>Denver.                             | Woman's Cottage       |
| Morrison, Ruth .....<br>Denver.                            | 1506 12th St.         |
| Morse, Florence May.....<br>Boise, Idaho.                  | 642 University St.    |
| Mosby, Wilhelmina Shortridge.....<br>Denver.               | 1114 12th St.         |
| Mosley, Herbert Richard .....<br>Denver.                   | 1165 13th St.         |
| O'Mahoney, Joseph Christopher .....<br>Corona, New York.   | 1324 Pine St.         |
| Packard, George Byron, Jr.....<br>Denver.                  | Men's Dormitory       |
| Paddock, Alva Adams.....<br>Boulder.                       | 1045 Pine St.         |
| Parker, Orpha May.....<br>Greeley.                         | 1076 12th St.         |
| Parkhurst, Arthur Abbott .....<br>Danvers, Illinois.       | 1091 14th St.         |
| Parrish, John Festus.....<br>Lamar.                        | 1091 14th St.         |
| Perkins, Merritt Holden.....<br>Greenfield, Massachusetts. | 720 Pine St.          |
| Phillips, Honora Elder.....<br>Columbus, Ohio.             | 1075 12th St.         |
| Pickett, Alma Bernice.....<br>Denver.                      | 744 Spruce St.        |
| Poe, Charles Franklin.....<br>Ault.                        | 1706 Athens St.       |

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE. |
|-------------------------------------------------------|-----------------------|
| Poley, Cyrus Watt.....<br>Boulder.                    | 1441 12th St.         |
| Rank, Mollie Faye .....<br>Boulder.                   | 1929 Walnut St.       |
| Renkes, Della Maud .....<br>Boulder.                  | 1620 Grove St.        |
| Ripley, Barbara Corinne.....<br>Topeka, Kansas.       | "The Alps"            |
| Roberts, Abygail Esther .....<br>Denver.              | 1004 Pleasant St.     |
| Rook, Mary Susie .....<br>Julesburg.                  | 1135 Broadway         |
| Salomon, Carl Emanuel .....<br>Berthoud.              | 1217 Spruce St.       |
| Scott, Helen .....<br>Ouray.                          | 1229 13th St.         |
| Shelledy, Ruth Marguerite .....<br>Aspen.             | 1341 Broadway         |
| Shepherd, Sarah Preston.....<br>Hannibal, Missouri.   | 1221 University St.   |
| Smith, Osmer Elliott.....<br>Fort Morgan.             | 1165 13th St.         |
| Spriggs, Lillian Irma .....<br>Springfield, Missouri. | 1040 11th St.         |
| Spyker, Allie Newton.....<br>Baton Rouge, Louisiana.  | 1135 Broadway         |
| Stearns, Bulah Ines.....<br>Boulder.                  | 1036 Grand View Ave.  |
| Sweeney, Mabel Emile.....<br>Denver.                  | 1146 Pleasant St.     |
| Todd, John Gordon.....<br>Denver.                     | 947 University St.    |
| Todd, Mary Louise .....<br>Denver.                    | 947 University St.    |
| Tourtellotte, Louise Lucretia.....<br>Denver.         | 1229 13th St.         |
| Trenoweth, Laura .....<br>Central City.               | 1233 Broadway         |
| Venables, Raymond Joseph .....<br>Boulder.            | 1037 12th St.         |
| Waltemeyer, Helen May.....<br>Boulder.                | 1005 12th St.         |
| Whiteley, Marguerite .....<br>Boulder.                | 1109 Pine St.         |
| Wilkinson, Carl Isaac.....<br>Riverside, California.  | 1165 13th St.         |
| Wilson, Oliver Chester .....<br>Denver.               | 1165 13th St.         |

## JUNIOR CLASS

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------|------------------------|
| Aurand, Harry Albert.....<br>Denver.                  | 1165 13th St.          |
| Avery, William Watson.....<br>Lake City.              | 1044 University St.    |
| Banks, Lee Frazer.....<br>Denver.                     | 1229 University St.    |
| Barrows, John Stockbridge.....<br>Denver.             | 1105 11th St.          |
| Bell, Geneva Mabel.....<br>Boulder.                   | 1931 Hill St.          |
| Berg, Louise Marie.....<br>Aspen.                     | 973 14th St.           |
| Brigham, Mildred Charlotte.....<br>Palmyra, New York. | 720 Pine St.           |
| Brown, Helen Mar.....<br>Lawton, Oklahoma.            | 1038 University St.    |
| Campbell, Charles Durham.....<br>Denver.              | 1325 Broadway          |
| Carhart, Rose.....<br>Ann Arbor, Michigan.            | 1510 13th St.          |
| Cary, Anna.....<br>Niagara Falls, New York.           | 1209 Pennsylvania Ave. |
| Coates, Helen Oatman.....<br>Denver.                  | 1134 Pleasant St.      |
| Cody, Mary Elizabeth.....<br>Central City.            | 829 University St.     |
| Conrey, Arthur John.....<br>Fort Collins.             | 1705 Athens St.        |
| Culver, George Warren.....<br>Fort Collins.           | 1135 11th St.          |
| Curtin, Elma Hope.....<br>Boulder.                    | 811 Mapleton Ave.      |
| Curtis, David Llewellyn.....<br>Castle Rock.          | 1042 University St.    |
| Cuthbertson, Helen Scott.....<br>Pueblo.              | 1061 12th St.          |
| De Voss, James Clarence.....<br>Boulder.              | 1327 6th St.           |
| Dier, Carol Althea.....<br>Golden.                    | 1229 13th St.          |
| Downing, Alice.....<br>Aspen.                         | 1221 University St.    |
| Dunklee, Edward Vaughan.....<br>Denver.               | 1135 11th St.          |
| Dyer, Eloie Churchill.....<br>Boulder.                | 417 Mapleton Ave.      |



| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.  |
|----------------------------------|------------------------|
| Elder, Mary Esther .....         | 1075 12th St.          |
| Columbus, Ohio.                  |                        |
| Evinger, Olive Permila .....     | 921 Maxwell Ave.       |
| Hamburg, Iowa.                   |                        |
| Fairchild, Grace Margaret .....  | 1155 10th St.          |
| Victor.                          |                        |
| Fleming, Edith .....             | 1036 14th St.          |
| Montrose.                        |                        |
| Flynn, John Philip .....         | 1135 11th St.          |
| Aspen.                           |                        |
| Gavin, William Edwin .....       | 1105 11th St.          |
| Indianapolis, Indiana.           |                        |
| Giacomini, Lawrence George ..... | 1044 University St.    |
| Sterling.                        |                        |
| Groom, Emma .....                | North 26th St.         |
| Boulder.                         |                        |
| Habermann, Caroline Louise ..... | 444 Concord Ave.       |
| Rico.                            |                        |
| Hall, Felicia Grace .....        | 615 Highland Ave.      |
| Boulder.                         |                        |
| Harding, Mildred Delta .....     | 1121 Pennsylvania Ave. |
| Walsenburg.                      |                        |
| Hawes, Edith May .....           | 440 Arapahoe Ave.      |
| Longmont.                        |                        |
| Hawes, Walter Clyde .....        | 440 Arapahoe Ave.      |
| Longmont.                        |                        |
| Healy, Harold Harris .....       | Men's Dormitory        |
| Denver.                          |                        |
| Henderson, Ruth .....            | 1165 12th St.          |
| Cleveland, Ohio.                 |                        |
| Hill, Anne Herbert .....         | 1134 Pleasant St.      |
| Waco, Texas.                     |                        |
| Hill, Frank Allen .....          | 1149 12th St.          |
| Grand Junction.                  |                        |
| Hinkle, Lawrence Earl .....      | 1012 14th St.          |
| Alamosa.                         |                        |
| Holaday, Horace Asa .....        | 1706 Athens St.        |
| Denver.                          |                        |
| Howe, Frank Bonar .....          | 1165 13th St.          |
| Colorado Springs.                |                        |
| Huber, Gertrude Selina .....     | 1121 13th St.          |
| Denver.                          |                        |
| Huffsmith, Charles Otis .....    | 1441 12th St.          |
| Greeley.                         |                        |
| Hyde, Louise .....               | 845 12th St.           |
| Newark, New York.                |                        |
| Jones, Alta May .....            | 1844 Athens St.        |
| Alamosa.                         |                        |

## NAME AND HOME RESIDENCE.

## UNIVERSITY RESIDENCE.

|                                          |                        |
|------------------------------------------|------------------------|
| Kilvert, Myrtle May.....<br>Ohio City.   | 1085 13th St.          |
| Leadbetter, Sue Emily.....<br>Denver.    | 1061 12th St.          |
| Lovelace, Walter Sharp.....<br>Brighton. | 1040 10th St.          |
| Lowrey, Anna .....                       | 1080 14th St.          |
| Lyman, Martha Holbrook .....             | 912 Marine St.         |
| Boulder.                                 |                        |
| LyVere, Floyd Eugene.....                | 1831 Pearl St.         |
| Lamar.                                   |                        |
| Mahoney, Nano Elizabeth.....             | 1216 Pleasant St.      |
| Denver.                                  |                        |
| McCarthy, Daniel Thaddeus.....           | 1140 10th St.          |
| Red Lake, Minnesota.                     |                        |
| McKenzie, Pauline Griswold .....         | 809 Pine St.           |
| Boulder.                                 |                        |
| Mills, Jared Warner, Jr.....             | 1229 University St.    |
| Denver.                                  |                        |
| Montgomery, Elsie Estella.....           | R. F. D. No. 1         |
| Boulder.                                 |                        |
| Montgomery, Victor Adna.....             | R. F. D. No. 1         |
| Boulder.                                 |                        |
| Moon, Zella Blanche.....                 | 1145 13th St.          |
| Cedar Falls, Iowa.                       |                        |
| Morris, Anna Belle .....                 | 960 Regent St.         |
| Georgetown.                              |                        |
| Morrison, William Louis.....             | 1603 Walnut St.        |
| Boulder.                                 |                        |
| Mosher, Walter Frederick .....           | 1107 12th St.          |
| Lansing, Michigan.                       |                        |
| Moys, May Adelaide .....                 | 421 Pine St.           |
| Boulder.                                 |                        |
| Nafe, John Paul.....                     | 2124 17th St.          |
| Boulder.                                 |                        |
| Nickell, Frank F.....                    | 1135 11th St.          |
| Sinks Grove, West Virginia.              |                        |
| Niehans, Rosa Katherine.....             | 2305 13th St.          |
| Cripple Creek.                           |                        |
| Odium, Arnold Asbury.....                | 921 Marine St.         |
| Whitehall, Michigan.                     |                        |
| Oldland, Carrie .....                    | 1146 Euclid Ave.       |
| Meeker.                                  |                        |
| Orr, Barbara Matilda Margaret.....       | 1121 Pennsylvania Ave. |
| Alice.                                   |                        |
| Ostrander, Harry Womersley.....          | Men's Dormitory        |
| Golden.                                  |                        |

| NAME AND HOME RESIDENCE.                         | UNIVERSITY RESIDENCE. |
|--------------------------------------------------|-----------------------|
| Peck, Mildred Armstrong.....<br>Denver.          | 1165 12th St.         |
| Preston, Calvin Belmont.....<br>Canon City.      | 1165 13th St.         |
| Preston, Jacob Coulter.....<br>Canon City.       | 1145 13th St.         |
| Prisk, Helen Alice.....<br>Nampa, Idaho.         | 1005 14th St.         |
| Remington, Oliver Samuel.....<br>Denver.         | 421 Concord Ave.      |
| Rentfro, William Earl.....<br>Lincoln, Nebraska. | 1344 Grand View Ave.  |
| Rucker, Pearl Barnette.....<br>Manitou.          | 1537 9th St.          |
| Salter, Bernice Alma.....<br>Pueblo.             | 1061 12th St.         |
| Schulte, Julius Paul.....<br>Oak Park, Illinois. | 1307 College Ave.     |
| Scott, Florence Helen.....<br>Denver.            | 1134 Pleasant St.     |
| Seely, Marie Waterbury.....<br>Boulder.          | 1117 Pine St.         |
| Statler, Nellie Margaret.....<br>Greeley.        | 1165 12th St.         |
| Stearns, Oletha.....<br>Boulder.                 | 1036 Grand View Ave.  |
| Steck, June Alma.....<br>Greeley.                | 1083 13th St.         |
| Stone, Clifford Hannibal.....<br>Gunnison.       | 1083 14th St.         |
| Storer, Todd Clement.....<br>Pueblo.             | Men's Dormitory       |
| Stow, John Owen.....<br>Onarga, Illinois.        | Colorado Sanitarium   |
| Taub, Selina.....<br>Denver.                     | 1121 13th St.         |
| Thielen, Gertrude Hendrie.....<br>Leadville.     | 1229 13th St.         |
| Thornton, Hattie May.....<br>Chicago.            | 1221 University St.   |
| Trezise, Elizabeth.....<br>Boulder.              | 1005 Spruce St.       |
| Trowbridge, Mary ..<br>Beaver Dam, Wisconsin.    | 606 Spruce St.        |
| Ward, Leila Ada.....<br>Geneseo, Illinois.       | 1113 10th St.         |

| NAME AND HOME RESIDENCE.                         | UNIVERSITY RESIDENCE. |
|--------------------------------------------------|-----------------------|
| Watson, Edith May.....<br>Kaneville, Illinois.   | 930 14th St.          |
| Worcester, Dean Amory.....<br>Thetford, Vermont. | 1065 11th St.         |

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### SOPHOMORE CLASS

| NAME AND HOME RESIDENCE.                                | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------|-----------------------|
| Allen, Charles Fred.....<br>Laurens, Iowa.              | 1089 13th St.         |
| Allison, Vera Ruth.....<br>McPherson, Kansas.           | 1165 12th St.         |
| Argue, Lora.....<br>Florence.                           | 720 Marine St.        |
| Baker, George Farnham.....<br>Nederland.                | 1165 Broadway         |
| Batchelder, Linda Leona.....<br>Sterling.               | 1221 University St.   |
| Bearss, Angie.....<br>Boulder.                          | 540 Marine St.        |
| Bell, James Washington.....<br>Boulder.                 | 1931 Hill St.         |
| Bluemel, Charles Sidney.....<br>Rugby, England.         | 1036 14th St.         |
| Boeck, Albert.....<br>Boise, Idaho.                     | 1135 11th St.         |
| Boeke, Elizabeth Wilhelmina.....<br>Pavillion, Wyoming. | 1076 12th St.         |
| Boeke, Lenore.....<br>Pavillion, Wyoming.               | 1076 12th St.         |
| Bond, Eugene Alva.....<br>Royston, Georgia.             | 1165 13th St.         |
| Bower, Ernest Harold.....<br>Bedford, Iowa.             | 419 Walnut St.        |
| Brown, Ethel Mae.....<br>Wayne, Nebraska.               | 953 11th St.          |
| Brown, Madge.....<br>Montrose.                          | R. F. D. No. 3        |
| Cannell, Lillian Ethel.....<br>Council Grove, Kansas.   | 1048 11th St.         |
| Carr, Olive Virginia.....<br>Aspen.                     | 1341 Broadway         |
| Casaday, Barton Robertson.....<br>Boulder.              | 505 Pine St.          |
| Charles, Neva Irene.....<br>Corpus Christi, Texas.      | 1031 13th St.         |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|------------------------|
| Chase, John Samson.....<br>Denver.                     | 912 14th St.           |
| Clark, Grace Edith.....<br>Oklahoma City, Oklahoma.    | 1061 12th St.          |
| Clifford, Ray Ernest.....<br>Denver.                   | 1105 11th St.          |
| Cochran, Gladys Luella.....<br>Del Norte.              | 1131 University St.    |
| Counter, Clara Jane.....<br>Brighton.                  | 1209 Pennsylvania Ave. |
| Cowie, Josephine Rachel.....<br>Boulder.               | 703 Pine St.           |
| Craig, Maud Elizabeth.....<br>Boulder.                 | 1135 9th Ave.          |
| Curtis, Rupert Carlyle.....<br>Littleton.              | 1083 14th St.          |
| Cuthbertson, Lulu Lee.....<br>Pueblo.                  | 1061 12th St.          |
| Dawson, Maud Ethel.....<br>Denver.                     | 973 14th St.           |
| Donifelser, Edna Zelma.....<br>Boulder.                | 707 Maxwell Ave.       |
| Drake, Helen Frances.....<br>Pueblo.                   | 1229 13th St.          |
| Drinkwater, Russell Robert.....<br>Denver.             | 1229 University St.    |
| Duncan, James Prentiss.....<br>Princeton, Indiana.     | 1844 Athens St.        |
| Engelbach, Augustus Arthur.....<br>Denver.             | 1125 Pleasant St.      |
| Farnsworth, Anna Belle.....<br>Shelby, Iowa.           | 1722 12th St.          |
| Farrington, Edith Constance.....<br>Boulder.           | 1506 12th St.          |
| Fickes, Leland Stanford.....<br>Sterling.              | 2041 15th St.          |
| Funk, Ilo Claire.....<br>Cripple Creek.                | 1044 Pleasant St.      |
| Galligan, Florence Esther.....<br>Ouray.               | 1083 14th St.          |
| Gates, Mabel Eleanor.....<br>Monte Vista.              | 1233 Broadway          |
| Goodykoontz, Colin Brummitt.....<br>La Porte, Indiana. | 1027 10th St.          |
| Gundrum, Richard Warren.....<br>Denver.                | 1045 Pennsylvania Ave. |
| Guthrie, Paul Roy.....<br>Aspen.                       | 1053 12th St.          |

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.  |
|-----------------------------------|------------------------|
| Ham, Wilkie C.....                | Men's Dormitory        |
| Caddoa.                           |                        |
| Hankins, Margaret Marie.....      | 1606 Pine St.          |
| Boulder.                          |                        |
| Harrison, Mayzel Elwood.....      | 1061 12th St.          |
| Pueblo.                           |                        |
| Hassinger, Willmette .....        | 1045 12th St.          |
| Denver.                           |                        |
| Hills, Roy Owensby .....          | 956 University St.     |
| Boulder.                          |                        |
| Hinchman, Fred Kimpton.....       | 1019 14th St.          |
| Denver.                           |                        |
| Hollowell, Sallie Zilpha.....     | 1080 14th St.          |
| Denver.                           |                        |
| Hough, Gladys .....               | 1131 University St.    |
| Basalt.                           |                        |
| Hurst, Charles Clive.....         | 1203 Pennsylvania Ave. |
| Anderson, Indiana.                |                        |
| Irish, Willis Luther.....         | 2041 15th St.          |
| Sterling.                         |                        |
| Jackson, Emma Albertina .....     | 1567 9th St.           |
| Red Oak, Iowa.                    |                        |
| Jameson, Kathryn .....            | 1254 Pleasant St.      |
| Golden.                           |                        |
| Johnson, Charles Beattie, Jr..... | 1091 14th St.          |
| Shreveport, Louisiana.            |                        |
| Johnson, Florence May.....        | 1045 12th St.          |
| Central City.                     |                        |
| Jones, Orson Pennoyer.....        | 1305 17th St.          |
| Aurora.                           |                        |
| Kansgen, Ada Christena .....      | South 24th St.         |
| Montrose.                         |                        |
| Kayden, Eugene M.....             | Men's Dormitory        |
| Brooklyn, New York.               |                        |
| Kendall, Claribel .....           | 1325 Broadway          |
| Denver.                           |                        |
| Kenyon, Harrison Morton.....      | City Y. M. C. A.       |
| Loveland.                         |                        |
| Kneale, Mildred Hazel.....        | 2043 Arapahoe Ave.     |
| Boulder.                          |                        |
| Laudemann, Harry Mohn.....        | 1135 Pennsylvania Ave. |
| Denver.                           |                        |
| Lannon, Fannie Mae .....          | 1076 12th St.          |
| Pueblo.                           |                        |
| Lavelle, Elizabeth Harry .....    | 1040 14th St.          |
| Denver.                           |                        |
| Lee, Robert Emmet .....           | 1141 11th St.          |
| Denver.                           |                        |



| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE.                     |
|-------------------------------|-------------------------------------------|
| Leonard, Eleanor .....        | 1229 13th St.<br>Denver.                  |
| Lewis, James David .....      | 1st and Pearl Sts.<br>Sunshine.           |
| Lillie, Neva May .....        | 744 Spruce St.<br>Denver.                 |
| Lowe, Naamah .....            | 1325 Broadway<br>Durango.                 |
| Lynch, Elwood Best .....      | 1307 College Ave.<br>Leadville.           |
| Mahoney, Margaret Agnes ..... | 1216 Pleasant St.<br>Denver.              |
| Mann, Paul Cyrus .....        | 1123 Spruce St.<br>Denver.                |
| Martin, Esther Storey .....   | Woman's Cottage<br>Victor.                |
| Martin, Joseph Anthony .....  | 972 14th St.<br>Trinidad.                 |
| Maupin, Bertha Saggau .....   | 901 Pearl St.<br>Boulder.                 |
| McFadden, John Francis .....  | 1121 University St.<br>Longmont.          |
| Merrill, Georgia Ruth .....   | 821 Mapleton Ave.<br>Boulder.             |
| Morrish, Ross William .....   | 1511 12th St.<br>New Windsor.             |
| Morse, Mary .....             | 1229 13th St.<br>Denver.                  |
| Mosher, Jack Marsh .....      | 1229 University St.<br>Greeley.           |
| Nelson, Kate .....            | 1068 12th St.<br>Aspen.                   |
| Nighswander, Goldie Una ..... | 1606 Floral Park<br>Denver.               |
| Noxon, Ella Rose .....        | 2303 Arapahoe Ave.<br>Idaho Springs.      |
| Ochsner, Lillian Clara .....  | 932 15th St.<br>Hermann, Missouri.        |
| Ohlbach, Anna Louise .....    | 973 14th St.<br>Denver.                   |
| O'Rourke, Mary Jane .....     | 644 Spruce St.<br>Dolores.                |
| Parish, Lottie Belle .....    | 1221 University St.<br>Johnstown.         |
| Persons, Lucile Clyde .....   | 909 10th St.<br>Pueblo.                   |
| Persons, Lucile Irene .....   | 1165 12th St.<br>Mansfield, South Dakota. |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|------------------------|
| Pierce, Edna .....<br>Denver.                          | 1229 13th St.          |
| Potter, Mae E. ....<br>Denver.                         | 1221 University St.    |
| Reynolds, Edna Marguerite .....<br>Denver.             | 1209 Pennsylvania Ave. |
| Ryals, Mary Helen .....<br>Denver.                     | 1165 12th St.          |
| Schoenwald, Elizabeth .....<br>Cripple Creek.          | 1138 Pleasant St.      |
| Schumacher, Herman Joseph .....<br>Humphrey, Nebraska. | 1089 13th St.          |
| Seeman, Bernard Johnson.....<br>Denver.                | 1203 Pennsylvania Ave. |
| Shumate, Ruth Churchill .....<br>Aspen.                | 1146 Euclid Ave.       |
| Slocum, Cecile Hortense .....<br>Boulder.              | 1244 Pine St.          |
| Slusher, James Easson.....<br>Cripple Creek.           | 1125 Pleasant St.      |
| Smith, Charles Alfred.....<br>Sterling.                | 2041 15th St.          |
| Smith, George Albert.....<br>Fowler.                   | City Y. M. C. A.       |
| Smith, Iva Pearl.....<br>Boulder.                      | 1065 11th St.          |
| Sproule, Milly .....<br>Eagle.                         | 1131 University St.    |
| Strickler, Lynda Louise .....<br>Denver.               | 1061 12th St.          |
| Swain, Elva Charles.....<br>Quincy, Illinois.          | 1131 University St.    |
| Toby, Emma Caroline .....<br>Denver.                   | 806 Spruce St.         |
| Trovillion, Beatrice .....<br>Boulder.                 | 941 Pearl St.          |
| Turner, Edna .....<br>Boulder.                         | 2213 Pine St.          |
| Turney, Vera Faye .....<br>Loveland.                   | 1131 University St.    |
| Vagnino, Pedro Fortunate .....<br>Denver.              | Men's Dormitory        |
| Vaille, Rebecca Whitehall .....<br>Denver.             | 1233 Broadway          |
| Varney, Fred William .....<br>Denver.                  | 1205 13th St.          |
| Venemann, Eva Mae .....<br>West Lafayette, Indiana.    | 1827 Grove St.         |

| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE.              |
|-------------------------------|------------------------------------|
| Ward, Marian .....            | Wolf Block<br>Alma.                |
| Weaver, Carl Franklin.....    | 1143 Broadway<br>Canton, Illinois. |
| Webb, Besse .....             | 1607 6th St.<br>Boulder.           |
| Whitman, Earle Hill .....     | 1229 University St.<br>Pueblo.     |
| Wilson, Golenda Mae .....     | 1040 11th St.<br>Meeker.           |
| Wilson, Thornton Arnold ..... | 1155 Portland Place<br>Boulder.    |
| Wright, Earl Edwin .....      | 1205 13th St.<br>Denver.           |
| Wright, Lois May .....        | 975 Pleasant St.<br>Greeley.       |

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### FRESHMAN CLASS

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.               |
|-----------------------------------|-------------------------------------|
| Alexander, Charles Freeman .....  | 1026 Pine St.<br>Stockton, Kansas.  |
| Allen, May .....                  | Boulderado Hotel<br>Pueblo.         |
| Anderson, Anna Victoria .....     | 944 Marine St.<br>Denver.           |
| Anderson, Olga Elizabeth .....    | 1012 Maxwell Ave.<br>Boulder.       |
| Armstrong, Claughton Leslie ..... | 1121 University St.<br>Longmont.    |
| Ashley, Thomas Cooley.....        | 1139 12th St.<br>Saguache.          |
| Atkinson, Ernest Thomas .....     | 1932 18th St.<br>Greeley.           |
| Aurand, Mary McClure .....        | 1012 University St.<br>Denver.      |
| Bacon, Reginald Reuben .....      | 1044 University St.<br>Ouray.       |
| Baker, Hilton Vaughn .....        | University Campus<br>Boulder.       |
| Ball, Una Laura .....             | 541 Arapahoe Ave.<br>Idaho Springs. |
| Barelay, Emile Power .....        | 1045 12th St.<br>Longmont.          |
| Barr, Mary Ortie .....            | 975 Pleasant St.<br>Greeley.        |
| Bartlett, Helen .....             | 1138 Pleasant St.<br>Denver.        |

| NAME AND HOME RESIDENCE.        | UNIVERSITY RESIDENCE.                    |
|---------------------------------|------------------------------------------|
| Bassler, Ray Herbert .....      | 1509 Arapahoe Ave.<br>Montrose.          |
| Bird, Charles Harold .....      | 1203 Pennsylvania Ave.<br>Denver.        |
| Bishop, Will Finley .....       | 1121 University St.<br>Denver.           |
| Blakeley, Mildred Rosella ..... | 1131 University St.<br>Hotchkiss.        |
| Boeke, Richardt Miles .....     | 1105 12th St.<br>Pavillion, Wyoming.     |
| Bottum, Margaret .....          | 1165 12th St.<br>Aberdeen, South Dakota. |
| Brewster, Irma Edith .....      | 1004 Pleasant St.<br>Salida.             |
| Briggs, Alice .....             | 1146 12th St.<br>Boulder.                |
| Brock, John Lide, Jr. ....      | 1165 13th St.<br>Denver.                 |
| Brooks, Edgar Earl .....        | 1004 14th St.<br>Pueblo.                 |
| Brown, Iris .....               | 1040 14th St.<br>Montclair.              |
| Brown, Nellie C. ....           | 1135 Broadway<br>Eaton.                  |
| Brownlee, Teresa Beatrice ..... | 1061 14th St.<br>Ouray.                  |
| Bruner, Richard James, Jr. .... | 1089 13th St.<br>Pueblo.                 |
| Bumann, Mae Christina .....     | 1704 Grove St.<br>Hartley, Iowa.         |
| Bunce, Hazel Udine .....        | 1135 Broadway<br>Fruita.                 |
| Burke, Maude Estella .....      | 1002 Spruce St.<br>Friend, Nebraska.     |
| Burke, Ruth Genevieve .....     | 1002 Spruce St.<br>Friend, Nebraska.     |
| Burke, Thomas Emmett .....      | 1213 Broadway<br>Goldfield, Nevada.      |
| Burkhard, Walter .....          | 1125 Pleasant St.<br>Trinidad.           |
| Buskirk, Frank Herring .....    | 1044 University St.<br>Ouray.            |
| Butters, Gladys Almeda .....    | 1005 14th St.<br>Denver.                 |
| Campbell, Flora Coline .....    | Woman's Building<br>Denver.              |
| Carlson, Minnie Olivia .....    | 1843 Grove St.<br>Longmont.              |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|------------------------|
| Carney, Helen Margaret .....<br>Pueblo.                | 1019 14th St.          |
| Chase, Mabel Leonard .....<br>Boulder.                 | 1018 Pine St.          |
| Chipman, Ina Myrtle .....<br>Sterling.                 | 1044 12th St.          |
| Chittenden, Dorothy .....<br>Denver.                   | 1229 13th St.          |
| Cosgrove, Maud Alice .....<br>Silver City, New Mexico. | 983 14th St.           |
| Cowell, Hazel .....<br>Grand Junction.                 | 1506 12th St.          |
| Coyle, Dena May .....<br>Pueblo.                       | 1221 University St.    |
| Crook, Arta Bell .....<br>Glenwood Springs.            | 1100 Pennsylvania Ave. |
| Curtis, Gladys Constance.....<br>Castle Rock.          | 1024 University St.    |
| Daniels, Mentor Byron .....<br>Pueblo.                 | 1148 11th St.          |
| Davis, Jessie A. ....<br>Fort Collins.                 | 1421 Broadway          |
| Dean, Bessie Jane .....<br>Grand Junction.             | 1506 12th St.          |
| Dean, Willa Agatha .....<br>Grand Junction.            | 1506 12th St.          |
| Deatherage, Mary Charlaire .....<br>Twin Falls, Idaho. | 1527 5th St.           |
| Doughty, Charles Linton, Jr.....<br>Lamar.             | 1037 12th St.          |
| Drinkwater, Harold Paul .....<br>Denver.               | 1229 University St.    |
| Duggan, Royal Edward .....<br>Hoehne.                  | 930 14th St.           |
| Dwyer, Harold .....<br>Cheyenne, Wyoming.              | 1037 12th St.          |
| Eddy, Elise Osgood .....<br>Denver.                    | 1138 Pleasant St.      |
| Ellsberg, Ned .....<br>Denver.                         | Men's Dormitory        |
| Fair, Evan Albert .....<br>Chrisman, Illinois.         | 1019 14th St.          |
| Fallis, Myrtle Kathryn.....<br>Denver.                 | 1229 13th St.          |
| Farrington, Florence Mildred .....<br>Boulder.         | 1506 12th St.          |
| Fenner, Helen Elizabeth .....<br>Denver.               | 1040 Mapleton Ave.     |

| NAME AND HOME RESIDENCE.        | UNIVERSITY RESIDENCE.                    |
|---------------------------------|------------------------------------------|
| Fernald, Hester Butters.....    | 1146 10th St.<br>Boulder.                |
| Fleming, Minnie Eliza .....     | 1145 Grand View Ave.<br>Read.            |
| Fonda, Catherine Farrell .....  | 2135 8th St.<br>Boulder.                 |
| Fong, Kim Poon .....            | 1036 Grant Place<br>Canton, China.       |
| Foster, William Bethell .....   | 1205 13th St.<br>Denver.                 |
| Fowler, Gretchen Rhodehaus..... | 1038 University St.<br>Colorado Springs. |
| Franklin, Electa .....          | 1229 13th St.<br>Victor.                 |
| Fraser, Margaret Marie .....    | 534 Mapleton Ave.<br>Boulder.            |
| Ganson, Rose Elizabeth.....     | 1934 Pine St.<br>Idaho Springs.          |
| Gill, Katherine .....           | 1221 University St.<br>Littleton.        |
| Gise, Grace Susie .....         | 983 14th St.<br>Beloit, Kansas.          |
| Godfrey, Florence Eddy .....    | 720 Marine St.<br>Boulder.               |
| Graham, Violet .....            | 1135 Broadway<br>Richmond, Virginia.     |
| Greenman, Olga Caroline .....   | 1076 12th St.<br>Pueblo.                 |
| Gregory, Tessie Edith .....     | 1076 12th St.<br>Pueblo.                 |
| Groom, Robert John .....        | North 26th St.<br>Boulder.               |
| Hadsell, Zeda Myrtle .....      | 2100 Arapahoe Ave.<br>Cedaredge.         |
| Haines, Lila .....              | 1155 13th St.<br>Pueblo.                 |
| Hamilton, William Coulter.....  | 1165 13th St.<br>Hackensack, New Jersey. |
| Hardy, Giffin Brant .....       | 2236 17th St.<br>Paris, Illinois.        |
| Hart, Helen Louise .....        | 720 Mapleton Ave.<br>Boulder.            |
| Hartman, Warren Peter .....     | 1125 Pleasant St.<br>Longmont.           |
| Hawley, William Gray .....      | 1441 12th St.<br>Denver.                 |
| Heaton, Ross Leslie .....       | 1305 17th St.<br>Boulder.                |



| NAME AND HOME RESIDENCE.        | UNIVERSITY RESIDENCE.                    |
|---------------------------------|------------------------------------------|
| Heitz, Karlin Anna .....        | 1083 13th St.<br>Denver.                 |
| Hinkley, Lelia Mae .....        | 1044 12th St.<br>Sterling.               |
| Holman, Cora Lillian .....      | 1038 University St.<br>Colorado Springs. |
| Hubbard, Mae E. ....            | 1216 20th St.<br>Boulder.                |
| Huffaker,* Vivien Faye .....    | 1135 13th St.<br>Denver.                 |
| Huiskamp, Henry Christian.....  | 1045 University St.<br>Keokuk, Iowa.     |
| Hunt, Nell Ethel .....          | 946 11th St.<br>Chillicothe, Missouri.   |
| Hutchinson, Anna .....          | 642 Mapleton Ave.<br>Durango.            |
| Irving, Elizabeth Jane A.....   | 844 Spruce St.<br>Cripple Creek.         |
| Jobe, Estelle .....             | 1220 20th St.<br>Harrisburg, Illinois.   |
| Johnson, Anna Elvira .....      | 1155 13th St.<br>Berthoud.               |
| Kaiser, Harold Robert .....     | 1045 Pennsylvania Ave.<br>Breckenridge.  |
| Kearns, John William.....       | 921 S. 18th St.<br>Durango.              |
| Kemp, Frank Alexander, Jr.....  | 1105 11th St.<br>Denver.                 |
| Kendall, Florence .....         | 1325 Broadway<br>Denver.                 |
| Kennicott, Lillian May .....    | R. F. D. No. 3<br>Delta.                 |
| Kenyon, Elizabeth Marjory ..... | 1146 Pleasant St.<br>Salida.             |
| Kiker, Grace .....              | 2035 Spruce St.<br>Sargent, Nebraska.    |
| Kingsland, Edwin Russell .....  | 1105 11th St.<br>Denver.                 |
| Kishman, Maude Charlotte .....  | 1155 13th St.<br>Pueblo.                 |
| Kitchen, Ford .....             | 2041 15th St.<br>Spencer, Ohio.          |
| Kyle, Estelle Marie .....       | 1221 University St.<br>Denver.           |
| Lacy, Hannie Louise .....       | 520 Pearl St.<br>Rifle.                  |
| Lee, Helen May .....            | 1076 12th St.<br>Pueblo.                 |

| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.                       |
|----------------------------------|---------------------------------------------|
| Lee, Josephine Hodges .....      | 1165 12th St.<br>Denver.                    |
| Leslie, Katherine Bower .....    | 1229 13th St.<br>Pueblo.                    |
| LeVeque, Norma Ebolie .....      | 2503 12th St.<br>Boulder.                   |
| Lewis, Glenn Francis .....       | 1441 12th St.<br>Denver.                    |
| Lightbourn, Willis Baker .....   | 935 Spruce St.<br>Central City.             |
| Lowe, Irwin Merle .....          | 520 Pearl St.<br>Glenwood Springs.          |
| Lubers, Harry Lawrence, Jr. .... | 1229 University St.<br>Las Animas.          |
| Lund, Kathryn L. ....            | 1083 13th St.<br>Denver.                    |
| MacLean, Isabel Allen .....      | 1135 Broadway<br>Denver.                    |
| Madden, Gladdys Belle .....      | 1603 Spruce St.<br>Denver.                  |
| McClelland, James Robert .....   | Men's Dormitory<br>Idaho Springs.           |
| McDonnell, Joe Hunter .....      | 1307 College Ave.<br>Little Rock, Arkansas. |
| McGlothlen, Gladyce .....        | 1138 12th St.<br>Boulder.                   |
| McKenzie, William Warren .....   | 1148 11th St.<br>Billings, Montana.         |
| Meeker, Leo Martin .....         | 1135 11th St.<br>Lincoln, Nebraska.         |
| Meyer, Ralph Elwood .....        | 1135 Pennsylvania Ave.<br>Denver.           |
| Mihashi, Kura .....              | 1717 Pearl St.<br>Tokio, Japan.             |
| Mill, Dorothy .....              | 517 Pine St.<br>Boulder.                    |
| Miller, Erle Brenneman .....     | 1914 Broadway<br>York, Nebraska.            |
| Miller, Emma Lois .....          | 1131 University St.<br>Fort Collins.        |
| Miller, Eva Grace .....          | 1817 Athens St.<br>Boulder.                 |
| Mixer, Lura Lucile .....         | 1080 13th St.<br>Salida.                    |
| Mock, Cecil LeRoy .....          | 2027 Arapahoe Ave.<br>De Beque.             |
| Mock, Clinton John .....         | 2027 Arapahoe Ave.<br>De Beque.             |

| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.                         |
|----------------------------------|-----------------------------------------------|
| Morgan, May Gladys .....         | 1209 Pennsylvania Ave.<br>Canon City.         |
| Nafe, Helen Malcolm.....         | 2124 17th St.<br>Boulder.                     |
| Nagler, Lili Edith .....         | University Place<br>Edgerton, Ohio.           |
| Naugle, Benjamin Eben .....      | * 1229 University St.<br>Iliff.               |
| Odlum, Floyd Bostwick .....      | 921 Marine St.<br>Hillsdale, Michigan.        |
| O'Fallon, John Timothy .....     | 1141 11th St.<br>Montrose.                    |
| Olson, Esther Mathilda.....      | 1114 12th St.<br>Pueblo.                      |
| Owen, Jeannette Lucile .....     | 1153 Pleasant St.<br>Pueblo.                  |
| Parker, Myrtle Emma .....        | 1040 11th St.<br>Rifle.                       |
| Parlapiano, Sam .....            | 976 Pleasant St.<br>Pueblo.                   |
| Patten, Alva Philip .....        | University Place<br>Julesburg.                |
| Patterson, Harmie K. ....        | 1229 13th St.<br>Des Moines, Iowa.            |
| Patton, Rosamond Edith .....     | University Place<br>Gold Hill.                |
| Pearce, James William.....       | 1105 11th St.<br>Denver.                      |
| Peterson, Lola Maude .....       | 1514 Pine St.<br>Hillsboro, North Dakota.     |
| Peterson, Walter Leonard.....    | 1122 Portland Place<br>Boyceville, Wisconsin. |
| Pettibone, Jennie Adelaide ..... | 648 University St.<br>Boulder.                |
| Pickering, Eunice Eliza .....    | 1089 13th St.<br>Roswell, New Mexico.         |
| Place, Edwin Bray .....          | 935 10th St.<br>Boulder.                      |
| Plummer, Richard Michel .....    | 1203 Pennsylvania Ave.<br>Denver.             |
| Posse, Harriet Adeline .....     | 1910 Grove St.<br>Del Norte.                  |
| Potter, Clarence Leo.....        | 1229 University St.<br>Denver.                |
| Raber, Carrie Eda .....          | 1910 Grove St.<br>Del Norte.                  |
| Rachofsky, David Ezekial .....   | 1161 11th St.<br>Durango.                     |

| NAME AND HOME RESIDENCE.                                     | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------------|------------------------|
| Raney, James Earl .....<br>Palisade.                         | 1844 Athens St.        |
| Rathvon, Nathaniel Peter .....<br>Boulder.                   | 1333 Pine St.          |
| Redman, Alpha Roe .....<br>Paonia.                           | 1031 13th St.          |
| Reeve, Stanley Matthew .....<br>Denver.                      | 1139 12th St.          |
| Rewalt, Myrtle Anna .....<br>Ouray.                          | 1083 13th St           |
| Rhynedance, George Henry, Jr.....<br>New Haven, Connecticut. | 1456 12th St.          |
| Richards, Glenn William .....<br>Paonia.                     | 955 University St.     |
| Rinehart, Raymond Victor .....<br>Denver.                    | 1031 13th St.          |
| Robb, Raymond Edgar .....<br>Monte Vista.                    | 1165 Broadway          |
| Robbins, Harry William .....<br>Greeley.                     | 1161 11th St.          |
| Roberts, Leslie Morrison.....<br>Denver.                     | 1203 Pennsylvania Ave. |
| Robinson, Virginia Elizabeth .....<br>Arvada.                | 1083 13th St.          |
| Rohwer, George Newton .....<br>Boulder.                      | 624 Pine St.           |
| Roosa, Lottie .....<br>Boulder.                              | North 26th St.         |
| Rowen, Ralph Mahan .....<br>Longmont.                        | 1121 University St.    |
| Saboe, Martin L. ....<br>Longmont.                           | 1121 University St.    |
| Savage, Joe Carr .....<br>Denver.                            | 1205 13th St.          |
| Sayre, Leland Stanford .....<br>Boulder.                     | 960 11th St.           |
| Schmoll, Hazel Marguerite .....<br>Ward.                     | 1012 University St.    |
| Scott, Francis Herbert .....<br>Center.                      | 1920 13th St.          |
| Scott, Helen Darling .....<br>Manitou.                       | 1155 13th St.          |
| Shaw, George Hamlin .....<br>Houlton, Maine.                 | 1205 13th St.          |
| Shell, Joe Lieb .....<br>Darlington, Oklahoma.               | 1065 11th St.          |
| Shute, Ruby Ray .....<br>Denver.                             | 1325 Broadway          |

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.               |
|-----------------------------------|-------------------------------------|
| Simmons, Frances Elizabeth.....   | 1012 University St.<br>Denver.      |
| Sivers, John Isaac .....          | 2441 5th St.<br>Oakland, Iowa.      |
| Smith, Charlotte Merle .....      | 1065 11th St.<br>Boulder.           |
| Smith, Katherine Funk .....       | 2231 13th St.<br>Longmont.          |
| Smith, Margaret Robina .....      | 1083 13th St.<br>Montclair.         |
| Smith, Marguerite .....           | 1040 11th St.<br>Chicago, Illinois. |
| Smith, Mary Inetta .....          | 1145 Grand View Ave.<br>Longmont.   |
| Smith, Robert James .....         | 1930 18th St.<br>Greeley.           |
| Smith, Thelma .....               | Woman's Building<br>Fowler.         |
| Stalker, Jennie Lucile .....      | 2143 Pine St.<br>Boulder.           |
| Stanley, Ezma Fae .....           | Woman's Building<br>Lafayette.      |
| Stockder, Archibald Herbert ..... | 1145 13th St.<br>Canon City.        |
| Streamer, Lulu May .....          | 2520 Pearl St.<br>Boulder.          |
| Strickler, Gertrude Aline .....   | 1061 12th St.<br>Denver.            |
| Stuntz, Ruth Emeline .....        | 956 Marine St.<br>Victor.           |
| Sullivan, Edward James .....      | 1031 13th St.<br>Denver.            |
| Sutley, Melvin Lockett .....      | 1139 12th St.<br>Center.            |
| Swanson, Anna Victoria .....      | 960 15th St.<br>Georgetown.         |
| Swartz, Margaret Jane .....       | 977 9th St.<br>Dair City, Nebraska. |
| Swartzlender, Richard Dale.....   | 1165 13th St.<br>Tipton, Iowa.      |
| Tarbell, Robert Raymond .....     | 1139 12th St.<br>Saguache.          |
| Thomas, Charles .....             | 1165 13th St.<br>Denver.            |
| Vivian, Chauncey Higgins .....    | 1421 Broadway<br>Golden.            |
| Walker, Eleanor May .....         | 973 14th St.<br>Denver.             |

| NAME AND HOME RESIDENCE.       | UNIVERSITY RESIDENCE.              |
|--------------------------------|------------------------------------|
| Wheatley, Ralph Berne .....    | 1920 13th St.<br>Fruita.           |
| Wheeler, Kathleen Fisher ..... | 1040 12th St.<br>Greeley.          |
| White, Ralph Lee .....         | 433 Mapleton Ave.<br>Craig.        |
| Whiteley, Mary Helen .....     | 1109 Pine St.<br>Boulder.          |
| Williams, May Elizabeth .....  | 1155 13th St.<br>Leadville.        |
| Williams, Melva May .....      | 1538 Marine St.<br>Boulder.        |
| Willson, Harry Deuel .....     | 1133 Grand View Ave.<br>Durango.   |
| Winger, Olive Blanche .....    | 1703 14th St.<br>McCune, Kansas.   |
| Wolfe, Leonard .....           | 1012 14th St.<br>Hays, Kansas.     |
| Woodside, Lowell Newton .....  | 1808 15th St.<br>Rixford, Kansas.  |
| Wright, Zella Muriel .....     | 1100 Pennsylvania Ave.<br>Boulder. |
| Young, Margaret .....          | 1135 Broadway<br>Colorado Springs. |

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### SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.                     |
|-----------------------------------|-------------------------------------------|
| Arnett, Clyde Drumm .....         | 1153 Pleasant St.<br>Boulder.             |
| Berwin, Harriet .....             | 1083 13th St.<br>Houston, Texas.          |
| Blakey, Susie .....               | 972 14th St.<br>Paris, Missouri.          |
| Cline, William L. ....            | 1027 Pennsylvania Ave.<br>Holton, Kansas. |
| Condit, Harrison Smith .....      | 1140 Pearl St.<br>Arvada.                 |
| Coolidge, Eva Cole .....          | 1065 10th St.<br>Elmwood, Connecticut.    |
| Curtis, Titania Gwendolynne ..... | 1017 Grand View Ave.<br>Fowler.           |
| Doud, Herman .....                | 620 Marine St.<br>Hamilton, Illinois.     |
| Eberhart, Nina Pearl .....        | 619 Marine St.<br>Boulder.                |



| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------|------------------------|
| Eckhardt, John H. ....<br>Berthoud.                  | University Place       |
| Elliott, Ruth Dorothy .....<br>Clifton, Arizona.     | 1733 Broadway          |
| Fallas, Lura Lucille .....<br>Boulder.               | 1026 Pine St.          |
| Fielding, Mabel .....<br>Sterling.                   | 802 Pine St.           |
| Gordon, Amy .....<br>Bailey's Cross Roads, Virginia. | 1149 12th St.          |
| Hansen, Juliane Grace .....<br>Wood River, Nebraska. | 576 Marine St.         |
| Harley, George Townsend.....<br>New York, New York.  | 1441 12th St.          |
| Hoover, Ruth F. ....<br>Boulder.                     | 838 Spruce St.         |
| James, Strawder Marvin .....<br>Denver.              | 1058 13th St.          |
| Johnson, Rudolph R. B.....<br>Niwot.                 | University Place       |
| Klema, Julius Jaroslav .....<br>Denver.              | University Place       |
| Larrabee, Anna Leola .....<br>Vincennes, Indiana.    | Boulderado Hotel       |
| Lehrritter, Louisa Henrietta .....<br>Salida.        | 1109 13th St.          |
| Lobb, Emily Bostwick .....<br>New York, New York.    | 1004 Pleasant St.      |
| Lockhart, Ferd James .....<br>Kansas City, Missouri. | 1441 12th St.          |
| Lowell, Charles Lee .....<br>Colorado Springs.       | 1229 University St.    |
| Loyd, Stuart Elizabeth .....<br>Boulder.             | 2529 6th St.           |
| Marvin, Cornelius J. ....<br>Denver.                 | 1212 College Ave.      |
| McBride, John Cumming .....<br>Denver.               | University Place       |
| Morris, Mildred Hennetta .....<br>Denver.            | Woman's Building       |
| Murphy, Irene Frances .....<br>Spicer.               | 1155 13th St.          |
| Oliver, Eleanor Beatty .....<br>Denver.              | 1134 Pleasant St.      |
| Phillips, Florence Pearl .....<br>Cozad, Nebraska.   | Woman's Building       |
| Picken, Beulah Eunice.....<br>Ottumwa, Iowa.         | 1045 Pennsylvania Ave. |

| NAME AND HOME RESIDENCE     | UNIVERSITY RESIDENCE.                           |
|-----------------------------|-------------------------------------------------|
| Potter, Edna Paula .....    | 1221 University St.<br>Denver.                  |
| Reever, Alice May .....     | 17th and Grove Sts.<br>Glidden, Iowa.           |
| Reynolds, Mary Edna .....   | 801 Dewey Ave.<br>Georgetown.                   |
| Richardson, Dio .....       | 1061 14th St.<br>Enid, Oklahoma.                |
| Slocum, Mamie .....         | 1244 Pine St.<br>Pringhar, Iowa.                |
| Slye, John Dawson .....     | 15th St. and 2nd Ave.<br>Boulder.               |
| Smith, Ralph Carlyle .....  | 1058 13th St.<br>Denver.                        |
| Stanley, Clyde Leslie ..... | Men's Dormitory<br>Lafayette.                   |
| Staub, Walter J. ....       | 1045 University St.<br>Thompson, North Dakota.  |
| Towns, Theo .....           | 1229 13th St.<br>New York, New York.            |
| Vaughan, Harold L. ....     | 1441 12th St.<br>Cheyenne, Wyoming.             |
| Walker, Harriet Ethel ..... | 905 9th Ave.<br>Boulder.                        |
| Wang, Lingoh .....          | 1119 Broadway<br>Pekin, China.                  |
| Watkins, Clay Celia .....   | 1131 University St.<br>Pleasant Hill, Missouri. |
| Wilson, Fred Hinds .....    | Boulderado Hotel<br>Toledo, Ohio.               |
| Young, Charles Henry .....  | City Y. M. C. A.<br>Muscatine, Iowa.            |

# COLLEGE OF ENGINEERING

## SENIOR CLASS

| NAME AND HOME RESIDENCE.                              | COURSE. | UNIVERSITY RESIDENCE. |
|-------------------------------------------------------|---------|-----------------------|
| Adams, Charles Gale . . . . .<br>Greeley.             | M.E.    | 1441 12th St.         |
| Allen, Ernest Charles . . . . .<br>Boulder.           | M.E.    | R. F. D. No. 1        |
| Beeler, Vernard Melburn . . . . .<br>Pueblo.          | E.E.    | 1037 12th St.         |
| Berg, Albert Leonard . . . . .<br>Fruita.             | E.E.    | 944 Regent St.        |
| Clem, Joseph Earl . . . . .<br>Salida.                | E.E.    | 1037 12th St.         |
| Clucas, Richard Milton . . . . .<br>Pueblo.           | E.E.    | 1105 11th St.         |
| DeRemer, James Silas . . . . .<br>Glenwood Springs.   | E.E.    | 1713 Walnut St.       |
| Duff, Carl Mathias . . . . .<br>Versailles, Missouri. | C.E.    | 1135 Broadway         |
| Gill, Arthur William . . . . .<br>Merino.             | E.E.    | 1008 13th St.         |
| Goldsborough, James . . . . .<br>Denver.              | E.E.    | 1000 Grand View Ave.  |
| Hall, Charles Anderson . . . . .<br>Denver.           | M.E.    | 1441 12th St.         |
| Huntington, Whitney Clark . . . . .<br>Denver.        | C.E.    | 1105 11th St.         |
| Imrie, George Campbell . . . . .<br>Denver.           | C.E.    | 1044 University St.   |
| Knoettge, Carl Harmon . . . . .<br>Idaho Springs.     | C.E.    | 1044 Pleasant St.     |
| Metcalf, Virgil Ellsworth . . . . .<br>Boulder.       | E.E.    | 2043 Pine St.         |
| Millard, Floyd Hays . . . . .<br>Boulder.             | C.E.    | 1915 Pine St.         |
| Morgan, Newlin Dolby . . . . .<br>Denver.             | C.E.    | 947 University St.    |
| Morrill, Joseph Bradley . . . . .<br>Golden.          | E.E.    | 1105 11th St.         |
| O'Connor, John Francis . . . . .<br>Salida.           | E.E.    | 1004 University St.   |

| NAME AND HOME RESIDENCE.                              | COURSE.   | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------|-----------|------------------------|
| Pickering, Dale Augustus.....<br>Roswell, New Mexico. | E.E.....  | 1305 17th St.          |
| Pine, Percy Paris.....<br>Denver.                     | E.E.....  | 1305 17th St.          |
| Putnam, Merritt Howard.....<br>Fort Morgan.           | E.E.....  | 1025 Maxwell Ave.      |
| Rank, Frank Addison.....<br>Central City.             | E.E.....  | 1929 Walnut St.        |
| Roberts, Roy Powderly.....<br>Boulder.                | C.E.....  | 568 Marine St.         |
| Robertson, Elon Arthur.....<br>Boulder.               | E.E.....  | 1080 13th St.          |
| Scott, Ralph Albert.....<br>Denver.                   | Ch.E..... | 2043 Pennsylvania Ave. |
| Shumate, Churchill.....<br>Aspen                      | M.E.....  | 1146 Euclid Ave.       |
| Simmering, Siebelt Luke.....<br>Hastings, Nebraska.   | M.E.....  | 1004 14th St.          |
| Singleton, Joseph Fred.....<br>Alma.                  | E.E.....  | 828 Marine St.         |
| Smith, Julius Carroll.....<br>Salida.                 | M.E.....  | 1135 11th St.          |
| Starks, Verne Eugene.....<br>Fort Collins.            | E.E.....  | 1620 Walnut St.        |
| Sunnergren, Arvid Peter.....<br>Denver.               | E.E.....  | 1029 Pennsylvania Ave. |
| Tyler, Eugene Magnus.....<br>Mankato, Kansas.         | E.E.....  | 1204 Pleasant St.      |
| Walrath, Andrew Judson.....<br>Julesburg.             | E.E.....  | 1000 Grand View Ave.   |
| Weber, Edward Roland.....<br>Denver.                  | E.E.....  | 1037 12th St.          |

### JUNIOR CLASS

| NAME AND HOME RESIDENCE.                         | COURSE.   | UNIVERSITY RESIDENCE. |
|--------------------------------------------------|-----------|-----------------------|
| Belz, Clifford Curtis.....<br>Conrad, Iowa.      | Ch.E..... | 1091 14th St.         |
| Belz, Raymond Arthur.....<br>Conrad, Iowa.       | Ch.E..... | 1091 14th St.         |
| Beresford, Robert Morrison.....<br>Boulder.      | E.E.....  | 1064 13th St.         |
| Blake, Roland Patton.....<br>Montrose.           | Ch.E..... | 1034 Pine St.         |
| Brown, Frank Logan.....<br>St. Joseph, Missouri. | C.E.....  | 1421 Broadway         |

| NAME AND HOME RESIDENCE.                               | COURSE.   | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|-----------|------------------------|
| Brown, Ralph Leigh.....<br>Pueblo.                     | M.E.....  | 1105 11th St.          |
| Chapman, Leslie Monroe.....<br>Denver.                 | E.E.....  | 2305 13th St.          |
| Chase, Reginald Leighton.....<br>Denver.               | C.E.....  | Men's Dormitory        |
| Cowell, Franklin Wier.....<br>Denver.                  | C.E.....  | 1105 11th St.          |
| Crawford, Charles Ivan.....<br>Leadville.              | C.E.....  | 962 Pleasant St.       |
| Dierstein, Arthur Lewis.....<br>Leadville.             | C.E.....  | 1307 College Ave.      |
| Duff, Arthur Michael.....<br>Versailles, Missouri.     | C.E.....  | 1135 Broadway          |
| Fawcett, Charles De Van.....<br>Boulder.               | E.E.....  | 1515 Marine St.        |
| Finley, Robert Byron.....<br>Craig.                    | E.E.....  | 1027 Pennsylvania Ave. |
| Gilligan, Frank Thomas.....<br>Salida.                 | E.E.....  | 1044 University St.    |
| Hall, James Arthur.....<br>Del Norte.                  | C.E.....  | 1135 Pennsylvania Ave. |
| Hart, Alexander Piatt.....<br>Boulder.                 | E.E.....  | 720 Mapleton Ave.      |
| Hartford, Fred Dailey.....<br>Berthoud.                | C.E.....  | 1027 Pennsylvania Ave. |
| Heinz, Langley Raehrs.....<br>Creede.                  | C.E.....  | City Y. M. C. A.       |
| Johnston, Alexander Laughlin.....<br>Rathburn, Canada. | E.E.....  | 1557 9th St.           |
| Kelly, Alfred Allen.....<br>Victor.                    | M.E.....  | 1044 University St.    |
| Kurtz, Julius.....<br>Denver.                          | E.E.....  | 1081 11th St.          |
| Lamb, J. Graham.....<br>Greeley.                       | Ch.E..... | 1058 13th St.          |
| Madden, Maurice Michael.....<br>Aspen.                 | C.E.....  | 1227 Pine St.          |
| Mathis, Charles Clifford.....<br>Boulder.              | E.E.....  | 1104 Pine St.          |
| Matthews, George.....<br>Central City.                 | E.E.....  | 1205 13th St.          |
| McClurg, Verne Owen.....<br>Brush.                     | C.E.....  | 1705 Arapahoe Ave.     |
| McNeil, Orange Malcolm.....<br>Prescott, Arizona.      | C.E.....  | 969 10th St.           |
| Messinger, Laurence Winn.....<br>Denver.               | E.E.....  | 1441 12th St.          |

| NAME AND HOME RESIDENCE.                                 | COURSE.  | UNIVERSITY RESIDENCE.  |
|----------------------------------------------------------|----------|------------------------|
| Morris, Brinkley Bedford.....<br>Columbia, Missouri.     | C.E..... | The Seven Gables       |
| Moulton, Victor Channing.....<br>Meeker.                 | E.E..... | 1229 University St.    |
| Mueller, Charles Augustus.....<br>Gunnison.              | E.E..... | 1083 14th St.          |
| O'Brien, John Thomas.....<br>Cripple Creek.              | E.E..... | 1044 University St.    |
| Osborn, Verton Outwater.....<br>Montrose.                | E.E..... | Men's Dormitory        |
| Pease, Carl James.....<br>Montrose.                      | E.E..... | 1706 Athens St.        |
| Prince, Ernest.....<br>Boulder.                          | E.E..... | 1841 Athens St.        |
| Prouty, Winfred Lafayette.....<br>Denver.                | C.E..... | 1706 Athens St.        |
| Rachofsky, Morris Oscar.....<br>Durango.                 | E.E..... | 1161 11th St.          |
| Rachofsky, Oscar Morris.....<br>Central City.            | C.E..... | 706 Pine St.           |
| Randolph, Ward.....<br>Colorado Springs.                 | E.E..... | 1165 13th St.          |
| Read, Lee Wheeler.....<br>Council Bluffs, Iowa           | E.E..... | 1135 Pennsylvania Ave. |
| Roberts, Henry Martin.....<br>Denver.                    | C.E..... | 1229 University St.    |
| Rohde, Earnest Charles.....<br>State Center, Iowa.       | C.E..... | 1148 Marine St.        |
| Rose, John G.....<br>Palisade,                           | C.E..... | 1000 Grand View Ave.   |
| Savage, Henry Harold.....<br>La Junta.                   | C.E..... | 1045 University St.    |
| Shulters, Gardner Alvah.....<br>Sinclairville, New York. | C.E..... | 1722 12th St.          |
| Skerry, Harry Allen.....<br>Denver.                      | C.E..... | 1216 College Ave.      |
| Slusser, Horace G.....<br>Wheaton, Illinois.             | C.E..... | 1125 Pleasant St.      |
| Sperry, Charles Stillman.....<br>Washington, D. C.       | C.E..... | 1162 12th St.          |
| Stocker, Harry Short.....<br>Denver.                     | C.E..... | 1165 13th St.          |
| Sydow, William.....<br>Denver.                           | E.E..... | Men's Dormitory        |
| Tomlinson, Harley Elba.....<br>Denver.                   | C.E..... | University Campus      |



| NAME AND HOME RESIDENCE.    | COURSE.  | UNIVERSITY RESIDENCE.           |
|-----------------------------|----------|---------------------------------|
| Vernia, Harry Edwin.....    | C.E..... | 1141 11th St.<br>Cripple Creek. |
| Wightman, James Wesley..... | E.E..... | Men's Dormitory<br>Denver.      |

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## SOPHOMORE CLASS

| NAME AND HOME RESIDENCE.        | COURSE.   | UNIVERSITY RESIDENCE.                       |
|---------------------------------|-----------|---------------------------------------------|
| Abel, Richard James.....        | E.E.....  | 1045 Pennsylvania Ave.<br>Denver.           |
| Accola, Edward Conrad.....      | M.E.....  | 1229 University St.<br>Pueblo.              |
| Alling, Arthur R. ....          | C.E.....  | 1305 17th St.<br>San Antonio, Texas.        |
| Alsop, George Ralph, Jr.....    | C.E.....  | 1165 13th St.<br>Vincennes, Indiana.        |
| Armitage, Arthur Blair.....     | M.E.....  | 1203 Pennsylvania Ave.<br>Denver.           |
| Birdick, Arthur Almon .....     | E.E.....  | 1025 Pearl St.<br>Murphysboro, Illinois.    |
| Blakey, Marcus Austin.....      | M.E.....  | 972 14th St.<br>Fowler.                     |
| Bloch, Marx .....               | C.E.....  | 1140 10th St.<br>Georgetown.                |
| Bowler, Samuel Edward.....      | C.E.....  | 1058 13th St.<br>Montclair.                 |
| Briggs, Alfred Poyneer.....     | Ch.E..... | 1146 12th St.<br>Boulder.                   |
| Bush, Edwin Hollis .....        | M.E.....  | 1229 University St.<br>Birmingham, Alabama. |
| Carver, Walter Lewis.....       | E.E.....  | 1107 13th St.<br>Steamboat Springs.         |
| Clark, Cecil Swanger .....      | C.E.....  | 1221 University St.<br>Cheyenne Wells.      |
| Clinton, Stiles DeWitt.....     | Ch.E..... | 1705 Marine St.<br>New Haven, Connecticut.  |
| Cooper, Henry Sisson.....       | C.E.....  | 1165 13th St.<br>Denver.                    |
| Cragin, Harold Paul.....        | Ch.E..... | 1105 11th St.<br>New York, New York.        |
| Cressingham, Richard Harry..... | E.E.....  | Men's Dormitory<br>Denver.                  |
| Crisman, Clarence O. ....       | C.E.....  | 1229 University St.<br>Denver.              |
| Dahms, Robert Albert.....       | C.E.....  | 1141 11th St.<br>Park Rapids, Minnesota.    |
| Day, Calvin Lester.....         | C.E.....  | University Campus<br>Durango.               |

| NAME AND HOME RESIDENCE.                                | COURSE.   | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------|-----------|-----------------------|
| DesBrisay, George Stephen.....<br>Cripple Creek.        | C.E.....  | 2053 Hill St.         |
| Doerner, Henry Alfred.....<br>Denver.                   | Ch.E..... | 1135 11th St.         |
| Eaton, Albert Budd.....<br>Clay Center, Kansas.         | C.E.....  | 1146 Pleasant St.     |
| Filer, Enoch William.....<br>Mercer, Pennsylvania.      | M.E.....  | 1441 12th St.         |
| Fink, Carl Irwin.....<br>Alcott.                        | E.E.....  | 1430 Arapahoe Ave.    |
| Flynn, Ned Stanley.....<br>Aspen.                       | C.E.....  | 1105 11th St.         |
| Fraser, Andrew Chauncey.....<br>Boulder.                | E.E.....  | 534 Mapleton Ave.     |
| Giroux, Carl H.....<br>Boulder.                         | E.E.....  | 429 Highland Ave.     |
| Giroux, Ray Mortimer.....<br>Boulder.                   | E.E.....  | 429 Highland Ave.     |
| Greenwood, Arthur Irving.....<br>Hotchkiss.             | E.E.....  | 1080 14th St.         |
| Hamsher, John Lewis.....<br>Hastings, Nebraska.         | C.E.....  | 2445 7th St.          |
| Hanlon, William Clyde.....<br>Cleveland, Ohio.          | C.E.....  | 1441 12th St.         |
| Hartman, Warden Nathan.....<br>Longmont.                | M.E.....  | 1125 Pleasant St.     |
| Hull, Robert Harsh.....<br>Denver.                      | E.E.....  | 1141 11th St.         |
| Huntington, Glen Herbert.....<br>Denver.                | M.E.....  | 1105 11th St.         |
| Ingersoll, Warren Briggs.....<br>Sandy Creek, New York. | E.E.....  | 1408 Pearl St.        |
| Johnson, Walter H.....<br>Golden.                       | E.E.....  | 342 Pearl St.         |
| Kaufman, Lewis Bernhard.....<br>Denver.                 | E.E.....  | 1125 Pleasant St.     |
| Keating, William Jasper.....<br>Lamar.                  | E.E.....  | 1014 Regent St.       |
| Kettering, Walter Henry.....<br>Boulder.                | E.E.....  | 2039 Pine St.         |
| Krueger, George Henry.....<br>Denver.                   | M.E.....  | 1135 11th St.         |
| Lambdin, Ross McPherson.....<br>Waco, Texas.            | C.E.....  | 531 Arapahoe Ave.     |
| Laurence, Abraham Max.....<br>Trinidad.                 | C.E.....  | 1019 14th St.         |
| Leonard, Lynn Ruliff.....<br>Pittsford, Michigan.       | E.E.....  | 2031 13th St.         |

| NAME AND HOME RESIDENCE.                                  | COURSE.   | UNIVERSITY RESIDENCE.      |
|-----------------------------------------------------------|-----------|----------------------------|
| Limprecht, Elwood George .....<br>Durango.                | M.E.....  | University Campus          |
| Lindsey, Elbert Ray.....<br>San Jose, California.         | C.E.....  | 1920 13th St.              |
| Lonnecker, George Vye.....<br>Canon City.                 | E.E.....  | 1012 14th St.              |
| Lummis, Herbert Clare .....<br>Montclair, New Jersey.     | C.E.....  | 1145 Pennsylvania Ave.     |
| Markley, Walter Raymond .....<br>Montrose.                | E.E.....  | 1141 11th St.              |
| Mason, Marion Albert.....<br>Denver.                      | E.E.....  | 513 Marine St.             |
| McGinnis, William Lynn.....<br>Denver.                    | C.E.....  | 497 Arapahoe Ave.          |
| McKinney, Harry David .....<br>Pueblo.                    | E.E.....  | 1203 Pennsylvania Ave.     |
| Merrill, James Lynn.....<br>Boulder.                      | C.E.....  | 821 Mapleton Ave.          |
| Morrill, Benjamin Franklin, Jr.....<br>Brush.             | C.E.....  | 2052 Spruce St.            |
| Nelson, William Joseph.....<br>Georgetown.                | E.E.....  | 1129 13th St.              |
| Newkirk, Guy St. Clair.....<br>Denver.                    | C.E.....  | 1125 Pleasant St.          |
| Newton, Clem Arthur.....<br>Salida.                       | E.E.....  | 1093 10th St.              |
| Phillips, George Burton.....<br>Fruita.                   | E.E.....  | 1125 Pleasant St.          |
| Pierce, George Alexander.....<br>Denver.                  | E.E.....  | 828 Marine St.             |
| Pigg, Wilfred Leroy.....<br>Denver.                       | E.E.....  | 1058 13th St.              |
| Pile, Edwin Daniel.....<br>Sedan, Kansas.                 | C.E.....  | 1165 13th St.              |
| Purmort, George Eli.....<br>Salida.                       | C.E.....  | 1091 14th St.              |
| Randell, William Edward.....<br>Pueblo.                   | E.E.....  | 1706 Athens St.            |
| Randolph, Carl Lowell.....<br>Cherryvale, Kansas.         | C.E.....  | 1130 1st Ave.              |
| Raymond, Harold Newnham.....<br>St. Johns, New Brunswick. | E.E.....  | 1205 13th St.              |
| Rich, John Dillon.....<br>Yampa.                          | C.E. .... | Mt. St. Gertrude's Academy |
| Ritter, Carl Antony .....<br>Denver.                      | E.E.....  | 1441 12th St.              |
| Robertson, Roger Rockford .....<br>Hotchkiss.             | C.E.....  | 1140 Grand View Ave.       |

| NAME AND HOME RESIDENCE.                        | COURSE.   | UNIVERSITY RESIDENCE. |
|-------------------------------------------------|-----------|-----------------------|
| Rupp, Harry Kent ..... Monument.                | C.E.....  | 1141 11th St.         |
| Rymer, Dana Clyde..... Spring Lake, Michigan.   | C.E.....  | 1916 13th St.         |
| Schwer, Gus Leo ..... Pueblo.                   | M.E.....  | 976 Pleasant St.      |
| Simpson, Colin Campbell..... Denver.            | C.E.....  | 1229 University St.   |
| Spicer, Leonard Ellsworth..... La Junta.        | E.E.....  | 1089 13th St.         |
| Twiss, Robert H..... Athol, South Dakota.       | E.E.....  | 531 Arapahoe Ave.     |
| Van Gundy, Cecil..... Cheyenne, Wyoming.        | C.E.....  | 1141 11th St.         |
| Warkley, John Crosswell..... Cheyenne, Wyoming. | C.E.....  | 1135 11th St.         |
| Wightman, Irving Leslie..... Denver.            | E.E.....  | Men's Dormitory       |
| Woodbury, Joe Francis..... Greeley.             | Ch.E..... | 1129 13th St.         |
| Youtsey, Otho Elbert..... Fort Collins.         | E.E.....  | 1058 13th St.         |

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### FRESHMAN CLASS

| NAME AND HOME RESIDENCE.                            | COURSE.   | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------|-----------|------------------------|
| Armor, Claude Arnett..... Denver.                   | E.E.....  | Men's Dormitory        |
| Auers, J. Roy..... Pine.                            | C.E.....  | 1119 Broadway          |
| Bailey, Raymond Howard..... Denver.                 | E.E.....  | 1307 College Ave.      |
| Bailey, Warner Dunn..... Denver.                    | E.E.....  | 1307 College Ave.      |
| Baldwin, Henry Fay, Jr..... New Orleans, Louisiana. | C.E.....  | 1036 14th St.          |
| Barker, Howard Hill ..... Baraboo, Wisconsin.       | C.E.....  | 1727 Athens St.        |
| Blair, Tom Arthur ..... Montrose.                   | C.E.....  | 836 Dewey St.          |
| Blaisdell, Oscar Martin..... Ault.                  | E.E.....  | 1077 14th St.          |
| Blomgren, Walter Edward..... Boise, Idaho.          | C.E.....  | 1305 17th St.          |
| Bogue, Joseph Creswell..... Denver.                 | Ch.E..... | 1135 Pennsylvania Ave. |

| NAME AND HOME RESIDENCE.                                | COURSE.   | UNIVERSITY RESIDENCE.  |
|---------------------------------------------------------|-----------|------------------------|
| Bonner, Clyde Rayburn.....<br>Boulder.                  | C.E.....  | South Broadway         |
| Borden, Philip Sheridan.....<br>Boulder.                | E.E.....  | 1015 Portland Place    |
| Brace, Porter Hiscock.....<br>Denver.                   | E.E.....  | 1135 11th St.          |
| Bradfield, Louis George.....<br>Greeley.                | M.E.....  | 1077 14th St.          |
| Browning, Frederick Milton.....<br>Denver.              | Ch.E..... | 1441 12th St.          |
| Burr, Ira A.....<br>Canon City.                         | E.E.....  | 920 10th St.           |
| Calkins, Ray Lindsay.....<br>Montrose.                  | E.E.....  | 1036 14th St.          |
| Cargo, Robert Wayne.....<br>Denver.                     | M.E.....  | 1107 13th St.          |
| Carman, Orval E.....<br>Las Animas.                     | E.E.....  | 1816 Grove St.         |
| Cavers, Robert L. G.....<br>Denver.                     | E.E.....  | 1122 Pleasant St.      |
| Christian, William Jacob.....<br>Denver.                | E.E.....  | 1107 13th St.          |
| Clouser, John Milton.....<br>Denver.                    | E.E.....  | 1229 University St.    |
| Condit, Ralph M.....<br>Arvada.                         | E.E.....  | 1140 Pearl St.         |
| Copps, Chauncey Stoddard.....<br>West Aurora, Illinois. | M.E.....  | 643 Mapleton Ave.      |
| Curtis, Archibald Hepburn M.....<br>Sedalia.            | E.E.....  | 1083 14th St.          |
| Curtis, Leonard Eager, Jr.....<br>Colorado Springs.     | C.E.....  | 1091 14th St.          |
| Daniels, Robert Martin.....<br>Denver.                  | E.E.....  | 1044 University St.    |
| Davenport, Neil Emerson.....<br>Salida.                 | E.E.....  | 1091 14th St.          |
| Davies, David Earle.....<br>Durango.                    | E.E.....  | 1045 Pennsylvania Ave. |
| Day, Frank Wesley.....<br>Delta.                        | E.E.....  | 930 14th St.           |
| Drummond, Douglas John.....<br>Oglesby, Illinois.       | M.E.....  | 1333 Grand View Ave.   |
| Elliott, Preston Green.....<br>Farmington, New Mexico.  | E.E.....  | 704 Concord Ave.       |
| Ellsberg, Harry.....<br>Denver.                         | C.E.....  | Men's Dormitory        |
| Eveland, George Harmon.....<br>Garden Grove, Iowa.      | E.E.....  | 1044 10th St.          |

| NAME AND HOME RESIDENCE.                    | COURSE. | UNIVERSITY RESIDENCE.  |
|---------------------------------------------|---------|------------------------|
| Fleming, Walter H., Jr.<br>Montrose.        | E.E.    | 1036 14th St.          |
| Forsyth, Carl Payne<br>Boulder.             | C.E.    | 2124 Pine St.          |
| Gartland, Frank Joseph<br>Denver.           | E.E.    | 1031 13th St.          |
| Gleim, Ernest John<br>Denver.               | E.E.    | Men's Dormitory        |
| Grisham, Clarence Linley<br>Trinidad        | C.E.    | 1140 Grand View Ave.   |
| Hall, John Temple<br>Boulder.               | E.E.    | 615 Highland Ave.      |
| Hart, Louis Ireland<br>Boulder.             | C.E.    | 720 Mapleton Ave.      |
| Hocker, Carl Ernest<br>Rifle.               | C.E.    | 1216 College Ave.      |
| Houk, Charles Goulding<br>Durango.          | C.E.    | 1045 Pennsylvania Ave. |
| Hopwood, Herbert Webb<br>Rifle.             | E.E.    | 1216 College Ave.      |
| Jackson, Lawrence Oscar<br>Denver.          | C.E.    | 1216 College Ave.      |
| Jakway, Paul Russell<br>Durango.            | C.E.    | 1307 College Ave.      |
| Jeffrey, William Maxson<br>Elmdale, Kansas. | C.E.    | 820 Concord Ave.       |
| Jones, Benjamin Franklin<br>Center.         | C.E.    | 1019 14th St.          |
| Jones, Kirby Viglini<br>Denver.             | M.E.    | 1045 Pennsylvania Ave. |
| Jones, Leonard Charles<br>Boulder.          | C.E.    | 2327 21st St.          |
| Kantner, Wesley Harris<br>Denver.           | C.E.    | 1061 9th St.           |
| Kelley, Ralph Kennish<br>Greeley.           | C.E.    | 1229 University St.    |
| Kearns, Walter Stephen<br>Granada.          | M.E.    | 950 Grand View Ave.    |
| Kemp, Donald Campbell<br>Boulder.           | E.E.    | 1655 9th St.           |
| Kettle, James R. P.<br>Canon City.          | C.E.    | 1307 College Ave.      |
| Koenig, Samuel Adolph<br>Golden.            | E.E.    | 1135 Pennsylvania Ave. |
| Kopfer, William Buddee<br>Denver.           | E.E.    | 1307 College Ave.      |
| Leach, Winthrop Worcester<br>Denver.        | Ch.E.   | 1083 14th St.          |



| NAME AND HOME RESIDENCE.                                 | COURSE.   | UNIVERSITY RESIDENCE.  |
|----------------------------------------------------------|-----------|------------------------|
| Leisten, Henry.....<br>Aspen.                            | M.E.....  | 1706 Athens St.        |
| Leitch, William Branch.....<br>Kansas City, Missouri.    | C.E.....  | City Y. M. C. A.       |
| Liguori, Frederick A. de.....<br>Waterbury, Connecticut. | C.E.....  | 1133 Pleasant St.      |
| List, Alvin Fred.....<br>Denver.                         | E.E.....  | 1161 11th St.          |
| McArthur, Allan Early.....<br>Boulder.                   | M.E.....  | 1014 Spruce St.        |
| Maires, Lewis Kelsey.....<br>Denver.                     | E.E.....  | 1139 12th St.          |
| Malcouronne, DeWitt Clinton.....<br>Fort Collins.        | M.E.....  | 1107 13th St.          |
| Mallory, George Elwood.....<br>Boulder.                  | E.E.....  | 915 9th St.            |
| Mallory, Walter Frank.....<br>Boulder.                   | M.E.....  | 915 9th St.            |
| Matthews, Nathan Sanford.....<br>Telluride.              | E.E.....  | 2129 13th St.          |
| Mayne, Earl L.....<br>Denver.                            | E.E.....  | 1307 College Ave.      |
| McCallum, Donald Herbert.....<br>Cameron, Missouri.      | Ch.E..... | 1141 11th St.          |
| McCord, William Hoyt.....<br>Albion, Nebraska.           | C.E.....  | 1091 14th St.          |
| McEwen, Ralph Glendon.....<br>Preemption, Illinois.      | C.E.....  | 983 14th St.           |
| McMurray, Welcome.....<br>Denver.                        | E.E.....  | 1048 Pennsylvania Ave. |
| McNeil, Elbert Kerr.....<br>Louisville.                  | E.E.....  | 1112 Maxwell Ave.      |
| Middaugh, Freeman.....<br>Denver.                        | M.E.....  | 1058 13th St.          |
| Miller, Charles.....<br>Denver.                          | E.E.....  | 935 Marine St.         |
| Moreland, Alfred David.....<br>Denver.                   | E.E.....  | 1122 Pleasant St.      |
| Morrison, Leroy Pake.....<br>Sedalia, Missouri.          | E.E.....  | 1138 Grand View Ave.   |
| Moses, Raymond George.....<br>Denver.                    | E.E.....  | 1048 Pennsylvania Ave. |
| Moyle, Matt William.....<br>Silverton.                   | Ch.E..... | 2314 Arapahoe Ave.     |
| Mudge, Clarence Torrey.....<br>Albion, Michigan.         | Ch.E..... | University Place       |
| Murphy, Joseph Ambrose.....<br>Nampa, Idaho.             | C.E.....  | 1129 13th St.          |

| NAME AND HOME RESIDENCE.          | COURSE.       | UNIVERSITY RESIDENCE.                       |
|-----------------------------------|---------------|---------------------------------------------|
| Needham, Francis Joseph . . . . . | E.E. . . . .  | 1044 University St.<br>Victor.              |
| O'Connell, William Ward . . . . . | C.E. . . . .  | 1140 10th St.<br>Georgetown.                |
| O'Rourke, John Edward . . . . .   | E.E. . . . .  | 1089 13th St.<br>La Junta.                  |
| Penley, Benjamin . . . . .        | M.E. . . . .  | 1305 17th St.<br>Delta.                     |
| Perry, Harry Raymond . . . . .    | M.E. . . . .  | 1720 14th St.<br>Aspen.                     |
| Person, Clarence . . . . .        | E.E. . . . .  | 1307 College Ave.<br>Denver.                |
| Purdy, Sheldon Paul . . . . .     | C.E. . . . .  | 1307 College Ave.<br>Denver.                |
| Riblett, George Irvin . . . . .   | E.E. . . . .  | 1045 Pennsylvania Ave.<br>Denver.           |
| Roberts, Paul Bowen . . . . .     | E.E. . . . .  | 1145 13th St.<br>Idaho Springs.             |
| Roloson, Glenn Bruno . . . . .    | E.E. . . . .  | 1019 14th St.<br>Crestone.                  |
| Rowden, Morris Austin . . . . .   | E.E. . . . .  | 1044 University St.<br>Alamosa.             |
| Royce, Clarence Louis . . . . .   | E.E. . . . .  | 1307 College Ave.<br>Denver.                |
| Russell, Austin Phelps . . . . .  | C.E. . . . .  | 846 Pine St.<br>Boulder.                    |
| Saviers, John Smith . . . . .     | M.E. . . . .  | 1305 17th St.<br>Canon City.                |
| Sawyer, Arthur Lathrop . . . . .  | C.E. . . . .  | 1135 Pennsylvania Ave.<br>Greeley.          |
| Sewell, Robert Oscar . . . . .    | E.E. . . . .  | 1618 Grove St.<br>Carbondale.               |
| Short, Clarence Robert . . . . .  | C.E. . . . .  | 1212 College Ave.<br>Lime.                  |
| Steele, Leslie Rodney . . . . .   | Ch.E. . . . . | 8th and 14th Sts.<br>Tyndall, South Dakota. |
| Stewart, Eugene . . . . .         | E.E. . . . .  | 1204 Pleasant St.<br>Golden.                |
| Swift, Frank William . . . . .    | E.E. . . . .  | 1031 13th St.<br>Denver.                    |
| Thompson, Homer C. . . . .        | E.E. . . . .  | 930 14th St.<br>Canon City.                 |
| True, Charles Ancel . . . . .     | M.E. . . . .  | 1705 Marine St.<br>Boulder.                 |
| Unger, Max Samuel . . . . .       | Ch.E. . . . . | 1077 14th St.<br>Florence.                  |
| Uyeda, Seizo . . . . .            | E.E. . . . .  | 1112 University St.<br>Fukuoka, Japan.      |

| NAME AND HOME RESIDENCE.                         | COURSE.   | UNIVERSITY RESIDENCE. |
|--------------------------------------------------|-----------|-----------------------|
| Vaughn, Courtland DeLano .....<br>Denver.        | C.E.....  | 1205 13th St.         |
| Viets, Floyd Harvey.....<br>Rifle.               | E.E.....  | 1019 14th St.         |
| Wallace, Willard Wright.....<br>Fairplay.        | C.E.....  | 1083 14th St.         |
| Warner, Dayton .....<br>Durango.                 | C.E.....  | 1426 Pearl St.        |
| Watrous, Wallace Edward .....<br>Monte Vista.    | E.E.....  | 1165 Broadway         |
| Watson, Harold H.....<br>Pueblo.                 | M.E.....  | 1064 13th St.         |
| Weeks, Roy R.....<br>Cheyenne, Wyoming.          | C.E.....  | 1135 11th St.         |
| Wheatley, Walter Hannum.....<br>Denver.          | E.E.....  | 1139 12th St.         |
| Wilson, Arthur James.....<br>Eaton.              | Ch.E..... | 1080 10th St.         |
| Winter, Boyd Wahl .....<br>Santa Fe, New Mexico. | E.E.....  | 983 14th St.          |
| Wolff, Deane Jackson.....<br>Boulder.            | C.E.....  | 1515 11th St.         |
| Worcester, Harold Sidney.....<br>Victor.         | M.E.....  | 1819 Spruce St.       |

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SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------|------------------------|
| Beebe, John Dickson .....<br>Denver.                | 1044 University St.    |
| Echternach, Albert Verne .....<br>Palisade.         | 985 10th St.           |
| Hall, Walter Ralph .....<br>Denver.                 | 1537 Walnut St.        |
| Solomon, Irwin Rupert .....<br>St. Louis, Missouri. | 1085 13th St.          |
| Thompson, Herbert .....<br>Denver.                  | University Place       |
| Traxler, Harry Walter .....<br>Lamar.               | 1045 Pennsylvania Ave. |

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# SCHOOL OF MEDICINE

## FOURTH YEAR CLASS

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE. |
|--------------------------------------------------------|-----------------------|
| Argall, Albert Joseph .....<br>Denver.                 | 1205 13th St.         |
| Atkin, Ralph MacDermot .....<br>Old Castle, Ireland.   | "The Silverton"       |
| Brandenburg, Harmon Paul.....<br>Denver.               | 1058 13th St.         |
| Clement, Thomas Gage.....<br>Vernon Center, Minnesota. | 1557 9th St.          |
| Hudston, Ranulph .....<br>Denver.                      | 1405 12th St.         |
| Jackson, Mary Albright.....<br>Des Moines, Iowa.       | 527 Maxwell Ave.      |
| Naugle, Johnson Edward.....<br>Sterling.               | 1405 12th St.         |
| Saphro, Victor Oscar.....<br>Brooklyn, New York.       | 1806 16th St.         |
| Wasson, Walter William.....<br>Chrisman, Illinois.     | 1809 Athens St.       |

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## THIRD YEAR CLASS

| NAME AND HOME RESIDENCE.                          | UNIVERSITY RESIDENCE. |
|---------------------------------------------------|-----------------------|
| Edgar, Ammy Ballinger .....<br>Decatur, Illinois. | 1441 12th St.         |
| Ewing, Harry Chester.....<br>Great Bend, Kansas.  | 1107 12th St.         |
| Ham, Lillian Beecher .....<br>Johnson, Vermont.   | 1080 14th St.         |
| Henderson, Abby M. ....<br>Louisville.            | University Place      |
| Hills, Willard .....<br>Colorado Springs.         | University Hospital   |
| Kindall, Cleve Edwin .....<br>Pueblo.             | 1107 12th St.         |
| Lamme, James McGrew .....<br>Rockvale.            | 1107 12th St.         |

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE. |
|-----------------------------------|-----------------------|
| Palmer, Alfred Merle.....         | 1107 12th St.         |
| Oxford, Idaho.                    |                       |
| Pines, John Andrew .....          | 1080 14th St.         |
| Woodward, Iowa.                   |                       |
| Poley, Cyrus Watt .....           | 1441 12th St.         |
| Boulder.                          |                       |
| Shacket, Israel Arthur .....      | 1085 13th St.         |
| Denver.                           |                       |
| Schoen, Walter Albert .....       | 1107 12th St.         |
| Victor.                           |                       |
| Smith, Frank Burton .....         | 1107 12th St.         |
| Elwood, Nebraska.                 |                       |
| Stroud, Reginald James Henry..... | 1820 16th St.         |
| Halifax, Nova Scotia.             |                       |
| Tiffin, Charles Calvin.....       | 621 Maxwell Ave.      |
| Boulder.                          |                       |
| Wiggin, Mary Ha.....              | 1080 14th St.         |
| Fresno, California.               |                       |

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## SECOND YEAR CLASS

| NAME AND HOME RESIDENCE.       | UNIVERSITY RESIDENCE. |
|--------------------------------|-----------------------|
| Andrus, Adellon Devilla.....   | City Y. M. C. A.      |
| Ashland, Wisconsin.            |                       |
| Carmichael, Earle Keller ..... | 1058 13th St.         |
| Trinidad.                      |                       |
| Carmichael, Paul Wiles .....   | 1058 13th St.         |
| Trinidad.                      |                       |
| Fenton, Walter Wallace .....   | 985 10th St.          |
| Winchester, Ohio.              |                       |
| Forman, Ernest Daniel .....    | 985 10th St.          |
| Zalpa, Texas.                  |                       |
| Hanson, Fitch Phelps .....     | 1844 Athens St.       |
| Big Rapids, Michigan.          |                       |
| Hanson, Wayne Pierre .....     | 1107 12th St.         |
| Cheyenne, Wyoming.             |                       |
| Joiner, Manly Richard .....    | 1165 13th St.         |
| Talladega, Alabama.            |                       |
| Lewis, William Benjamin .....  | City Y. M. C. A.      |
| Louisville.                    |                       |
| McKell, William Scott.....     | City Y. M. C. A.      |
| Chillicothe, Ohio.             |                       |
| Minato, Kenji .....            | 1717 Pearl St.        |
| Akashi, Japan.                 |                       |
| Mitchell, Luther Ebert .....   | 1107 12th St.         |
| Cheyenne, Wyoming.             |                       |

| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE. |
|-------------------------------|-----------------------|
| Prosser, Dean Truxell .....   | 1105 11th St.         |
| New London, Ohio.             |                       |
| Smith, Erle Fisk .....        | 1703 14th St.         |
| Pueblo.                       |                       |
| Sutter, Loe Albright.....     | 311 Dewey St.         |
| Boulder.                      |                       |
| Walker, Thomas Franklin ..... | 1820 Pearl St.        |
| Kokomo.                       |                       |
| Weber, Frederick Henry.....   | 2430 4th St.          |
| Carr.                         |                       |
| Wells, J. William.....        | 1722 Grove St.        |
| Atchison, Kansas.             |                       |

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### FIRST YEAR CLASS

| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.  |
|----------------------------------|------------------------|
| Bloch, Leon .....                | 1031 13th St.          |
| Pueblo.                          |                        |
| Burket, Robert Smith.....        | 1203 Pennsylvania Ave. |
| Denver.                          |                        |
| Cary, Guy Clifton .....          | 930 14th St.           |
| Boulder.                         |                        |
| Charles, Harvey P.....           | 1031 13th St.          |
| Corpus Christi, Texas.           |                        |
| Clark, Maurice Arthur.....       | 1001 Spruce St.        |
| Boulder.                         |                        |
| Eglee, Edward Percy.....         | 1162 12th St.          |
| Flushing, New York.              |                        |
| Fitzsimmons, Charles E. ....     | University Place       |
| Denver.                          |                        |
| Groomer, Araminta Alice .....    | 1080 14th St.          |
| Denver.                          |                        |
| Haskell, Edward E. ....          | University Campus      |
| Carlos, Minnesota.               |                        |
| Heaton, Archibald Burdette.....  | 1305 17th St.          |
| Boulder.                         |                        |
| Hill, C. Ernest.....             | 1058 13th St.          |
| Richwood, Ohio.                  |                        |
| Hills, Carl C. ....              | 956 University St.     |
| Boulder.                         |                        |
| Hotchkiss, Walter Kendrick ..... | 1107 12th St.          |
| Denver.                          |                        |
| Kemble, Earl Wallace.....        | Boulderado Hotel       |
| Golden.                          |                        |
| Kendall, Lloyd Elmer .....       | 1107 12th St.          |
| Pueblo.                          |                        |



| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE.                         |
|-------------------------------|-----------------------------------------------|
| Lufkin, Arthur Ward .....     | 1021 12th St.<br>Denver.                      |
| McLauthlin, Carl Addison..... | 1229 University St.<br>Denver.                |
| Michael, Weiland J.....       | University Campus<br>Aspinwall, Pennsylvania. |
| Morse, Roy Adelbert.....      | 642 University St.<br>Boulder.                |
| Newton, Edward Kellan.....    | 1107 12th St.<br>Crown Point, Indiana.        |
| Nordby, Frederick Jorgen..... | 1531 12th St.<br>Boise, Idaho.                |
| Norris, Joseph Patrick.....   | University Place<br>Manitou.                  |
| Peebler, Roy Earl.....        | 1058 13th St.<br>Moscow, Idaho.               |
| Rapp, John Henry .....        | 1085 13th St.<br>La Junta.                    |
| Shisler, John William.....    | 1703 14th St.<br>Miami, Florida.              |
| Singer, Orville Upton .....   | 1083 14th St.<br>Clearfield, Iowa.            |
| Stenhouse, Henry Merritt..... | Men's Dormitory<br>Denver.                    |
| Stiffler, Martin Luther ..... | 1105 11th St.<br>Salem, Ohio.                 |
| Swaggart, Luman Birch.....    | 1122 Portland Place<br>Eldora, Iowa.          |
| Swartz, Fred George .....     | 977 9th St.<br>David City, Nebraska.          |
| Talbot, Robert Emmett.....    | 1107 12th St.<br>Denver.                      |
| Tatum, Arthur Lawrie.....     | 1810 Grove St.<br>West Branch, Iowa.          |
| Taylor, Ray Robinson.....     | 930 14th St.<br>Pueblo.                       |
| Tye, Vibart Burl .....        | 1703 14th St.<br>Denver.                      |

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## SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE.                    |
|-------------------------------|------------------------------------------|
| Archibald, Edward Glenn ..... | 2124 14th St.<br>Boulder.                |
| Castleman, Frank Riley.....   | 1204 Pleasant St.<br>Hamilton, New York. |
| Templeton, Harley D.....      | University Place<br>Zanesville, Ohio.    |

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# SCHOOL OF LAW

## THIRD YEAR CLASS

| NAME AND HOME RESIDENCE.                                   | UNIVERSITY RESIDENCE. |
|------------------------------------------------------------|-----------------------|
| Boehm, Gustavus Henriettus.....<br>Hermann, Missouri.      | 932 15th St.          |
| Busey, George Catlett.....<br>Pueblo.                      | 980 11th St.          |
| Cook, William Alexander.....<br>Lawton, Oklahoma.          | 916 Grand View Ave.   |
| Crist, Herman Edward .....<br>Georgetown.                  | 1140 10th St.         |
| Currier, George William.....<br>Denver.                    | 1325 Broadway         |
| Fairley, Leon Stanford.....<br>Colorado Springs.           | City Y. M. C. A.      |
| Fitzgerald, Arthur William.....<br>Richland, New York.     | 1557 9th St.          |
| Furrow, Elmer Otis.....<br>Potomee, Illinois.              | City Y. M. C. A.      |
| Harrell, Edgar Clifton .....<br>Albion, Michigan.          | 704 Pleasant St.      |
| Houtchens, Evert Harrison.....<br>Harrold, Texas.          | 1709 Spruce St.       |
| McCutchen, Clarence Monroe .....<br>Denver.                | 980 11th St.          |
| Meikle, John Marr.....<br>Bedford, Iowa.                   | 1135 11th St.         |
| Morgan, Clarence William.....<br>Champaign, Illinois.      | City Y. M. C. A.      |
| Morris, Sidney McCagg .....<br>Oskaloosa, Iowa.            | 1058 13th St.         |
| Nash, James Bartholomew.....<br>Georgetown.                | 1140 10th St.         |
| Nixon, Thomas Aaron .....<br>Greeley.                      | 627 Pine St.          |
| Peters, Julius Christopher.....<br>Shelby, Iowa.           | 1405 12th St.         |
| Rhoads, Ernest Leslie.....<br>Denver.                      | 1105 11th St.         |
| Rochford, Frederic Raymond.....<br>New Haven, Connecticut. | 1205 13th St.         |

| NAME AND HOME RESIDENCE.                      | UNIVERSITY RESIDENCE. |
|-----------------------------------------------|-----------------------|
| Smith, Crane Wilson.....<br>Cincinnati, Ohio. | 919 Pine St.          |
| Stirrett, Albert Elmer.....<br>Cripple Creek. | 1441 12th St.         |
| Waldo, Harold Russell.....<br>Canon City.     | 1135 11th St.         |
| Weinberger, Herman.....<br>Idaho Springs.     | Men's Dormitory       |
| Whiteley, George Andrews.....<br>Boulder.     | 1109 Pine St.         |
| Wright, Vernon Huntington.....<br>Denver.     | 1229 University St.   |

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## SECOND YEAR CLASS

| NAME AND HOME RESIDENCE.                                | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------|-----------------------|
| Armor, William Roy.....<br>Denver.                      | Men's Dormitory       |
| Bailey, George Jarbeau.....<br>Fort Collins.            | 1135 11th St.         |
| Blickhahn, George Henry.....<br>Walsenburg.             | 1627 17th St.         |
| Bonnell, Herbert Forman.....<br>Loveland.               | 1058 13th St.         |
| Bonner, Quentin Dan.....<br>Leadville.                  | 1044 University St.   |
| Booth, William Harrison.....<br>Denver.                 | 1205 13th St.         |
| Clark, John Robert.....<br>Cortez.                      | City Y. M. C. A.      |
| Cresto, Joseph J. ....<br>Trinidad.                     | 1012 14th St.         |
| Crowder, George Alfred.....<br>Cripple Creek.           | 1205 13th St.         |
| Cunningham, Arthur James.....<br>Beloit, Wisconsin.     | 1205 13th St.         |
| Downer, George Spelman.....<br>Denver.                  | 1205 13th St.         |
| Erickson, Bernhard Malcom.....<br>El Moro.              | 1140 Grand View Ave.  |
| Hedgcock, Charles Gordon.....<br>Las Vegas, New Mexico. | 1121 University St.   |
| Keim, Thurman Edward.....<br>Denver.                    | 1441 12th St.         |
| Kennedy, William Riddell.....<br>Denver.                | 1307 College Ave.     |

| NAME AND HOME RESIDENCE.           | UNIVERSITY RESIDENCE.                        |
|------------------------------------|----------------------------------------------|
| Knous, William Lee .....           | 1044 University St.<br>Ouray.                |
| Lewis, Ailey William .....         | Brainard Block<br>Carnegie, Pennsylvania.    |
| Lyon, LeRoy Edward .....           | 1035 Mapleton Ave.<br>Leoti, Kansas.         |
| Macaulay, Frederick Robertson..... | 865 12th St.<br>Montreal, Canada.            |
| Sackett, Samuel Albert .....       | 929 Regent St.<br>Colorado City.             |
| Smith, Frank Bernard.....          | University Place<br>Florence.                |
| Snyder, Earl Tyndell .....         | 1107 13th St.<br>Greeley.                    |
| Stewart, Alexander Thomas, Jr..... | Men's Dormitory<br>Pueblo.                   |
| Stidger, John Silcott .....        | 1441 12th St.<br>Fort Collins.               |
| Sutton, Walter Cleveland.....      | 1627 17th St.<br>Boulder.                    |
| Tyvand, Henry Albert.....          | 1121 University St.<br>Mt. Horeb, Wisconsin. |
| Waldo, William Beadle.....         | 1205 13th St.<br>Canon City.                 |
| Wilson, Clifford Allen .....       | 1089 13th St.<br>Hot Springs, South Dakota.  |

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### FIRST YEAR CLASS

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.                    |
|-----------------------------------|------------------------------------------|
| Adams, Charles Henry.....         | 1135 11th St.<br>Paonia.                 |
| Andrus, Ralph Roscoe .....        | 1205 13th St.<br>Denver.                 |
| Bliss, Charles Nelson.....        | 2431 Hill St.<br>Boulder.                |
| Borrego, Juan Ramon .....         | 969 Regent St.<br>Saguache.              |
| Bottum, Frank .....               | 1058 13th St.<br>Aberdeen, South Dakota. |
| Brinker, Walter Chenault, Jr..... | 1830 16th St.<br>Denver.                 |
| Carr, Ralph Lawrence.....         | 1441 12th St.<br>Cripple Creek.          |
| Cook, Charles .....               | Men's Dormitory<br>McLean, Texas.        |

| NAME AND HOME RESIDENCE.                                   | UNIVERSITY RESIDENCE. |
|------------------------------------------------------------|-----------------------|
| Crawford, Arthur Elbert.....<br>Longmont.                  | 2439 10th St.         |
| Crawford, Paul William.....<br>Pueblo.                     | 1037 12th St.         |
| Delaney, Frank Leo.....<br>Meeker.                         | 1089 13th St.         |
| Ellis, Erl Hubert.....<br>Denver.                          | 1830 16th St.         |
| Ferrell, James.....<br>Eugene, West Virginia.              | 1012 14th St.         |
| Grabill, Ralph Gillespie.....<br>Denver.                   | 1229 University St.   |
| Heit, Ezra Selleck.....<br>Clyde, New York.                | 1133 Grand View Ave.  |
| Hinman, Willis Rexford.....<br>Mt. Vernon, Washington.     | 940 10th St.          |
| Humphreys, George Llewellyn.....<br>Colorado Springs.      | 1205 13th St.         |
| Hunting, Edward O.....<br>Sloan, Iowa.                     | 1116 Mapleton Ave.    |
| Jones, Robert Henry.....<br>Suver, Oregon.                 | 965 Grand View Ave.   |
| Killgore, John Perry.....<br>Fort Collins.                 | 1107 13th St.         |
| Kimbrough, George Francis.....<br>Denver.                  | 1058 13th St.         |
| Laird, Roy Hummel.....<br>Pueblo.                          | 1703 14th St.         |
| LaRue, Emmet Morris.....<br>Rensselaer, Indiana.           | City Y. M. C. A.      |
| LeVeque, Grant Claudius.....<br>Boulder.                   | 2503 12th St.         |
| Lewis, Aquilla Cornelius.....<br>Harrisburg, Illinois.     | 1161 11th St.         |
| Morris, Robert Charles.....<br>Pueblo.                     | 969 Regent St.        |
| O'Brien, Robert Rolland.....<br>Denver.                    | 1229 University St.   |
| O'Rourke, John Bernard.....<br>Dolores.                    | 644 Spruce St.        |
| Paddock, Alva Adams.....<br>Boulder.                       | 1045 Pine St.         |
| Parrish, John Festus.....<br>Lamar.                        | 1091 14th St.         |
| Perkins, Merritt Holden.....<br>Greenfield, Massachusetts. | 720 Pine St.          |
| Pine, Frederick Walter.....<br>Miami, Florida.             | 1703 14th St.         |

| NAME AND HOME RESIDENCE.      | UNIVERSITY RESIDENCE.             |
|-------------------------------|-----------------------------------|
| Rigby, Charles Percy .....    | 1135 Pennsylvania Ave.<br>Meeker. |
| Sharp, Benjamin Cassius.....  | 1040 11th St.<br>Sidney, Ohio.    |
| Shaw, Roy Wheeler.....        | 1918 Bluff St.<br>Frisco.         |
| Smith, Osmer Elliott.....     | 1165 13th St.<br>Fort Morgan.     |
| Tanton, Ray George.....       | 1037 14th St.<br>Salida.          |
| Taylor, Grover .....          | Men's Dormitory<br>Denver.        |
| Venables, Raymond Joseph..... | 1037 12th St.<br>Boulder.         |
| Walker, Don Watts .....       | 1129 11th St.<br>Sigourney, Iowa. |
| Wilson, Oliver Chester .....  | 1165 13th St.<br>Denver.          |

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### SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.       | UNIVERSITY RESIDENCE.                        |
|--------------------------------|----------------------------------------------|
| King, Gordon Worthington.....  | 969 Regent St.<br>Villa Grove.               |
| McConnell, Giley Richard ..... | 1089 14th St.<br>Fort Lupton.                |
| Meeker, Leo Martin.....        | 1135 11th St.<br>Lincoln, Nebraska.          |
| Nickell, Frank F.....          | 1135 11th St.<br>Sinks Grove, West Virginia. |
| Pierrot, Adolph George .....   | 1511 12th St.<br>Chicago, Illinois.          |
| Schulte, Julius Paul .....     | 1135 11th St.<br>Oak Park, Illinois.         |
| Smith, Julius Carroll .....    | 1135 11th St.<br>Salida.                     |
| Vivian, John Charles.....      | 1421 Broadway<br>Golden.                     |

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## SUMMER SCHOOL STUDENTS, 1909

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| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE. |
|----------------------------------|-----------------------|
| Accola, Edward Conrad.....       | City Y. M. C. A.      |
| Pueblo.                          |                       |
| Baird, Itonia J. ....            | University Place      |
| Denver.                          |                       |
| Baker, Bessie .....              | 1135 Broadway         |
| Carthage, Missouri.              |                       |
| Baker, Hilton Vaughn.....        | University Campus     |
| Boulder.                         |                       |
| Baldwin, Henry Fay, Jr.....      | 1091 14th St.         |
| New Orleans, Louisiana.          |                       |
| Bergheim, Milton .....           | 1313 Pine St.         |
| Boulder.                         |                       |
| Boland, Marvin D.....            | 1441 12th St.         |
| Sterling.                        |                       |
| Boswell, Fannie Judith.....      | 825 Spruce St.        |
| Parker.                          |                       |
| Bowen, Lawver Winter .....       | 1127 Broadway         |
| Denver.                          |                       |
| Boyd, Byron Bennett.....         | University Place      |
| Denver.                          |                       |
| Branson, Ernest Patton.....      | 969 Regent St.        |
| Yampa.                           |                       |
| Briggs, Alfred Poynur .....      | 1146 12th St.         |
| Boulder.                         |                       |
| Brooks, Eva .....                | 969 Regent St.        |
| Steamboat Springs.               |                       |
| Broome, Lenore Catherine.....    | 1221 University St.   |
| Pueblo.                          |                       |
| Brown, Frank Logan.....          | 1421 Broadway         |
| St. Joseph, Missouri.            |                       |
| Brown, Helen Mar.....            | 1038 University St.   |
| Lawton, Oklahoma.                |                       |
| Bruderlin, Katharine Maria ..... | Tolland               |
| Denver.                          |                       |
| Burnett, Clough T. ....          | 525 Highland Ave.     |
| Boulder.                         |                       |
| Byrne, Clara R. ....             | 1165 Broadway         |
| St. Joseph, Missouri.            |                       |
| Calkins, Maud Lucy.....          | University Place      |
| Brooklyn, New York.              |                       |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|------------------------|
| Callaway, William Otis.....<br>Pueblo.                 | 928 University St.     |
| Campbell, Claude M. ....<br>Boulder.                   | 522 Pine St.           |
| Campbell, Ivy Gertrude.....<br>Malvern, Iowa.          | 1221 University St.    |
| Campbell, Malcolm Samuel.....<br>Malvern, Iowa.        | 1221 University St.    |
| Carpenter, Eleanor .....<br>Pittsburg, Pennsylvania.   | 1209 Pennsylvania Ave. |
| Cary, Guy Clifton.....<br>Boulder.                     | 930 14th St.           |
| Castleberry, Marvin .....<br>Olustee, Oklahoma.        | University Place       |
| Chase, Louise .....<br>Boulder.                        | 1018 Pine St.          |
| Clark, Henrietta .....<br>Boulder.                     | 1125 Grand View Ave.   |
| Clayton, Grover N. ....<br>Paxton, Indiana.            | University Place       |
| Clement, Thomas Gage.....<br>Vernon Center, Minnesota. | 1809 Athens St.        |
| Cockle, Grace Lydia.....<br>Gunnison.                  | 606 Spruce St.         |
| Cook, William A. ....<br>Groveton, Texas.              | 1129 13th St.          |
| Coons, Franklin Wayne.....<br>Humboldt, Nebraska.      | 1040 11th St.          |
| Cotten, Mittie .....<br>Tecumseh, Oklahoma.            | 1165 13th St.          |
| Cummings, Elbert A.....<br>Colorado Springs.           | 1165 Broadway          |
| Dabney, Henry Oscar.....<br>Seguin, Texas.             | University Place       |
| Daeschner, August .....<br>Del Norte.                  | 521 Mountain View Ave. |
| DeLong, Ruth Elizabeth .....<br>Boulder.               | 1341 Broadway          |
| Drake, Hattie .....<br>Gibbon, Nebraska.               | 1036 14th St.          |
| Eberhart, Nina Pearl .....<br>Boulder.                 | 619 Marine St.         |
| Elliott, Lera Biddena.....<br>Boulder.                 | 2437 Spruce St.        |
| Elliott, Ora .....<br>Wray.                            | 1040 11th St.          |
| Ellis, Erl Hubert.....<br>Denver.                      | 1830 16th St.          |

| NAME AND HOME RESIDENCE.          | UNIVERSITY RESIDENCE.  |
|-----------------------------------|------------------------|
| Field, Georgia Louise.....        | 973 14th St.           |
| Hillsboro, Massachusetts.         |                        |
| Fillers, Herbert Donald .....     | 1145 13th St.          |
| Athens, Texas.                    |                        |
| Fisher, Bertha .....              | 1121 University St.    |
| Chicago, Illinois.                |                        |
| Fitts, Levy Nathaniel, Jr.....    | 1456 12th St.          |
| Colorado Springs.                 |                        |
| Frawley, Josephine Elizabeth..... | 1301 Grand View Ave.   |
| Denver.                           |                        |
| Fulton, John Hayes.....           | City Y. M. C. A.       |
| Pueblo.                           |                        |
| Gage, Nura Frances .....          | 1100 Pennsylvania Ave. |
| Cameron, Missouri.                |                        |
| Gilbert, Oscar M.....             | 1235 Pine St.          |
| Boulder.                          |                        |
| Gill, Arthur William .....        | 1058 13th St.          |
| Merino.                           |                        |
| Gillaspie, Carbon .....           | 2629 Pine St.          |
| Boulder.                          |                        |
| Gillinger, Ethel .....            | 1005 14th St.          |
| Glen Elder, Kansas.               |                        |
| Giss, Selma M.....                | North 26th St.         |
| Boulder.                          |                        |
| Goldsborough, James .....         | City Y. M. C. A.       |
| Laramie, Wyoming.                 |                        |
| Gordon, Amy .....                 | 1149 12th St.          |
| Bailey's Cross Road, Virginia.    |                        |
| Hagman, Josephine Barbara.....    | 2705 12th St.          |
| Boulder.                          |                        |
| Hall, Charles Anderson.....       | 1456 12th St.          |
| Denver.                           |                        |
| Hall, Irene Cleota.....           | 1004 14th St.          |
| Denver.                           |                        |
| Hanel, Everett .....              | 1627 17th St.          |
| Brighton.                         |                        |
| Henby, Abbie Eliza.....           | University Place       |
| Greenfield, Indiana.              |                        |
| Hendren, Arloa Elizabeth .....    | 2105 Spruce St.        |
| Boulder.                          |                        |
| Higginbotham, J. W.....           | 1535 Broadway          |
| Garlington, Oklahoma.             |                        |
| Hoellischer, Margaret .....       | 1716 17th St.          |
| Karlsruhe, Germany.               |                        |
| Hoelscher, Geneva A.....          | 940 15th St.           |
| Boulder.                          |                        |
| Holaday, Horace Asa.....          | 1706 Athens St.        |
| Denver.                           |                        |

| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------|------------------------|
| Holt, Charles Wilson.....<br>Naponee, Nebraska.      | 973 14th St.           |
| Hoskins, Alan Glenn.....<br>Boulder.                 | 926 Marine St.         |
| Hughes, Mildred Beatrice.....<br>Fowler.             | 1716 17th St.          |
| Huntington, Whitney Clark.....<br>Denver.            | 1125 Pleasant St.      |
| Huston, May .....<br>Goodland, Indiana.              | 1165 12th St.          |
| Iliff, Maude M.....<br>Liberty Center, Indiana.      | University Place       |
| Jackson, Clara Marie .....<br>Le Mars, Iowa.         | 940 15th St.           |
| Jolley, William A.....<br>Boulder.                   | 1053 Pine St.          |
| Jones, Alta May .....<br>Alamosa.                    | 1844 Athens St.        |
| Jordan, Sara Marie.....<br>Denver.                   | University Place       |
| Kerr, Harry Alfred .....<br>Park Rapids, Minnesota.  | 1141 11th St.          |
| Kerr, Proctor Henry .....<br>Independence, Missouri. | University Place       |
| Kirkton, Oralin V. ....<br>Canon City.               | Tolland                |
| Lady, William Franklin .....<br>Victor.              | 1145 13th St.          |
| Lakeman, Mary Emma .....<br>Boulder.                 | 956 Marine St.         |
| Lamb, James Graham.....<br>Greeley.                  | 1058 13th St.          |
| Lambdin, Ross McPherson.....<br>Waco, Texas.         | 1141 11th St.          |
| Lamm, Nettie R.....<br>Sedalia, Missouri.            | 1229 13th St.          |
| Laney, Corinne .....<br>Tupelo, Mississippi.         | 1135 Broadway          |
| Leibovitch, Joseph .....<br>New York, New York.      | 1203 Pennsylvania Ave. |
| Leonard, Eleanor .....<br>Denver.                    | 1229 13th St.          |
| Letta, Elizabeth .....<br>Sedalia, Missouri.         | 1229 13th St.          |
| Letts, Martha M.....<br>Sedalia, Missouri.           | 1229 13th St.          |
| Mallory, George Elwood.....<br>Boulder.              | 940 10th St.           |

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------|------------------------|
| Mallory, Walter Frank.....<br>Boulder.                | 940 10th St.           |
| Mark, Edward W. B.....<br>Boulder.                    | 1054 Grant Place       |
| Marshall, John A. ....<br>Victor.                     | 932 15th St.           |
| McCarthy, Daniel T.....<br>Denver.                    | 1019 14th St.          |
| McCarty, Belle .....<br>Wabash, Indiana.              | 1905 Arapahoe Ave.     |
| McCarty, Fannie .....<br>Wabash, Indiana.             | 1905 Arapahoe Ave.     |
| McCray, Lida Blanche .....<br>Ouray.                  | 1135 Broadway          |
| Mechan, Kathryn .....<br>Adams, Missouri.             | 1203 Pennsylvania Ave. |
| Melcher, William .....<br>Cedaredge.                  | 1105 11th St.          |
| Mihashi, Kura .....<br>Zaimoke, Japan.                | 1112 University St.    |
| Mitchell, Louis A.....<br>Newark, Ohio.               | 1127 Broadway          |
| Moon, Zella Blanche .....<br>Boulder.                 | 1145 13th St.          |
| Mosley, Herbert Richard.....<br>Denver.               | 1145 13th St.          |
| Moys, May Adelaide.....<br>Boulder.                   | 421 Pine St.           |
| Nicol, Carl Conrad.....<br>Tacoma, Washington.        | 1119 Broadway          |
| Norton, Ernest R.....<br>Newell, Iowa.                | University Place       |
| O'Royle, Lila Margaret .....<br>Grand Junction.       | 1121 University St.    |
| Oldland, Carrie .....<br>Meeker.                      | 1146 10th St.          |
| Oliver, Lucile Elizabeth.....<br>Nettleton, Missouri. | 1005 14th St.          |
| Orvis, Julia G. ....<br>Dubuque, Iowa.                | University Place       |
| Parker, Orpha May .....<br>Boulder.                   | 1076 12th St.          |
| Petty, W. J. ....<br>Du Bois, Pennsylvania.           | University Place       |
| Phillips, George Burton .....<br>Fruita.              | 1135 Broadway          |
| Pixley, Marie Louise.....<br>Portsmouth, Ohio.        | 1133 Pleasant St.      |

| NAME AND HOME RESIDENCE.                                | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------|-----------------------|
| Potter, Annie Maria .....<br>Boulder.                   | 1540 Pine St.         |
| Prosser, Dean Truxell.....<br>New London, Ohio.         | Tolland               |
| Pryor, Hugh Clark.....<br>Custer, South Dakota.         | 1145 13th St.         |
| Queal, Emley B.....<br>Boulder.                         | 1414 Pine St.         |
| Rank, Frank A. ....<br>Boulder.                         | 1929 Walnut St.       |
| Rank, Mollie Faye .....<br>Boulder.                     | 1929 Walnut St.       |
| Reed, Walter W.....<br>Boulder.                         | 2044 Walnut St.       |
| Richards, John R.....<br>Colorado Springs.              | 1513 Spruce St.       |
| Rinehart, Estella .....<br>Dixon, Illinois.             | Tolland               |
| Robertson, Elon Arthur.....<br>Boulder.                 | 1080 13th St.         |
| Rodes, Landon O. ....<br>Boulder.                       | 1155 Portland Place   |
| Russell, Ruth .....<br>Ann Arbor, Michigan.             | 1162 12th St.         |
| Salabar, Florence .....<br>Bayfield.                    | University Place      |
| Seely, Marie Waterbury .....<br>Boulder.                | 1117 Pine St.         |
| Seevers, Adalyn L. ....<br>Fort Morgan.                 | 1135 Broadway         |
| Severance, Francis E.....<br>Winthrop, Minnesota.       | 1029 University St.   |
| Shelledy, Ruth Marguerite .....<br>Spokane, Washington. | 1341 Broadway         |
| Shephard, William Henry.....<br>Minneapolis, Minnesota. | 1133 Pleasant St.     |
| Shepherd, Sara Preston.....<br>Hannibal, Missouri.      | 1221 University St.   |
| Sherwood, George Clarence.....<br>Canon City.           | 1143 Portland Place   |
| Shumate, Ruth Churchill.....<br>Aspen.                  | 1146 10th St.         |
| Slocum, Cecile Hortense.....<br>Boulder.                | 1244 Pine St.         |
| Smith, Osmer E.....<br>Fort Morgan.                     | 1165 13th St.         |
| Solomon, Irwin .....<br>St. Louis, Missouri.            | 1085 13th St.         |



| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------|------------------------|
| Spaulding, Iva M. ....<br>Kansas City, Missouri.     | 1109 Pennsylvania Ave. |
| Spencer, Carrie Minella .....<br>Colorado City.      | 1456 12th St.          |
| Starks, Verne Eugene.....<br>Fort Collins.           | City Y. M. C. A.       |
| Stine, Elizabeth Macklin .....<br>Cheyenne, Wyoming. | 1127 12th St.          |
| Stoddard, William Smith.....<br>Boulder.             | 1127 12th St.          |
| Stuntz, Ruth Emilie .....<br>Victor.                 | 956 Marine St.         |
| Sullivan, George Leonard.....<br>Jackson, Nebraska.  | 1133 Pleasant St.      |
| Sweeney, Mabel Emile.....<br>Denver.                 | 1165 13th St.          |
| Taylor, Julia C.....<br>Grand Junction.              | 1135 Broadway          |
| Thomas, Mattie J. ....<br>Bonner Springs, Kansas.    | 1426 19th St.          |
| Thompson, Addie .....<br>St. Joseph, Missouri.       | 1165 Broadway          |
| Thornton, Hattie May.....<br>Chicago, Illinois.      | 1229 University St.    |
| Thurston, Lula .....<br>Conway, Arkansas.            | 1040 11th St.          |
| Tilley, Maurine .....<br>Hamilton, Missouri.         | 1089 13th St.          |
| Todd, Mary Louise .....<br>Boulder.                  | 947 University St.     |
| Trezise, Elizabeth .....<br>Boulder.                 | 1005 Spruce St.        |
| Tucker, Robert Hewitt .....<br>Muncie, Indiana.      | 1165 13th St.          |
| Van Metre, Harold Tipton.....<br>Tipton, Iowa.       | University Place       |
| Wang, Ching Chun .....<br>Pekin, China.              | 1307 College Ave.      |
| Weber, John William.....<br>Craig.                   | 1028 Maxwell Ave.      |
| Wetzeloberger, Paul .....<br>Boulder.                | University Place       |
| Weylright, Guy M. ....<br>Rocky Ford.                | 1203 13th St.          |
| Wheeler, Clarissa .....<br>Bridgeton, New Jersey.    | 632 University St.     |
| Wilkinson, Carl Isaac.....<br>Riverside, California. | 1165 13th St.          |

| NAME AND HOME RESIDENCE.                  | UNIVERSITY RESIDENCE. |
|-------------------------------------------|-----------------------|
| Wilson, Faith .....<br>Enid, Oklahoma.    | 1535 Broadway         |
| Wise, Ruth McCutcheon .....<br>Boulder.   | 1938 Walnut St.       |
| Worley, Wilma E. ....<br>Blair, Nebraska. | 1107 12th St.         |
| Zook, Mary .....<br>Oregon, Missouri.     | 1207 College Ave.     |

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## COLLEGE OF LIBERAL ARTS—

|                        |        |
|------------------------|--------|
| Seniors .....          | 91     |
| Juniors .....          | 96     |
| Sophomores .....       | 123    |
| Freshmen .....         | 218    |
| Special Students ..... | 49—577 |

## COLLEGE OF ENGINEERING—

|                        |       |
|------------------------|-------|
| Seniors .....          | 35    |
| Juniors .....          | 54    |
| Sophomores .....       | 79    |
| Freshmen .....         | 118   |
| Special Students ..... | 6—292 |

## SCHOOL OF MEDICINE—

|                        |       |
|------------------------|-------|
| Fourth Year .....      | 9     |
| Third Year .....       | 16    |
| Second Year .....      | 18    |
| First Year .....       | 34    |
| Special Students ..... | 3— 80 |

## SCHOOL OF LAW—

|                        |       |
|------------------------|-------|
| Third Year .....       | 25    |
| Second Year .....      | 28    |
| First Year .....       | 41    |
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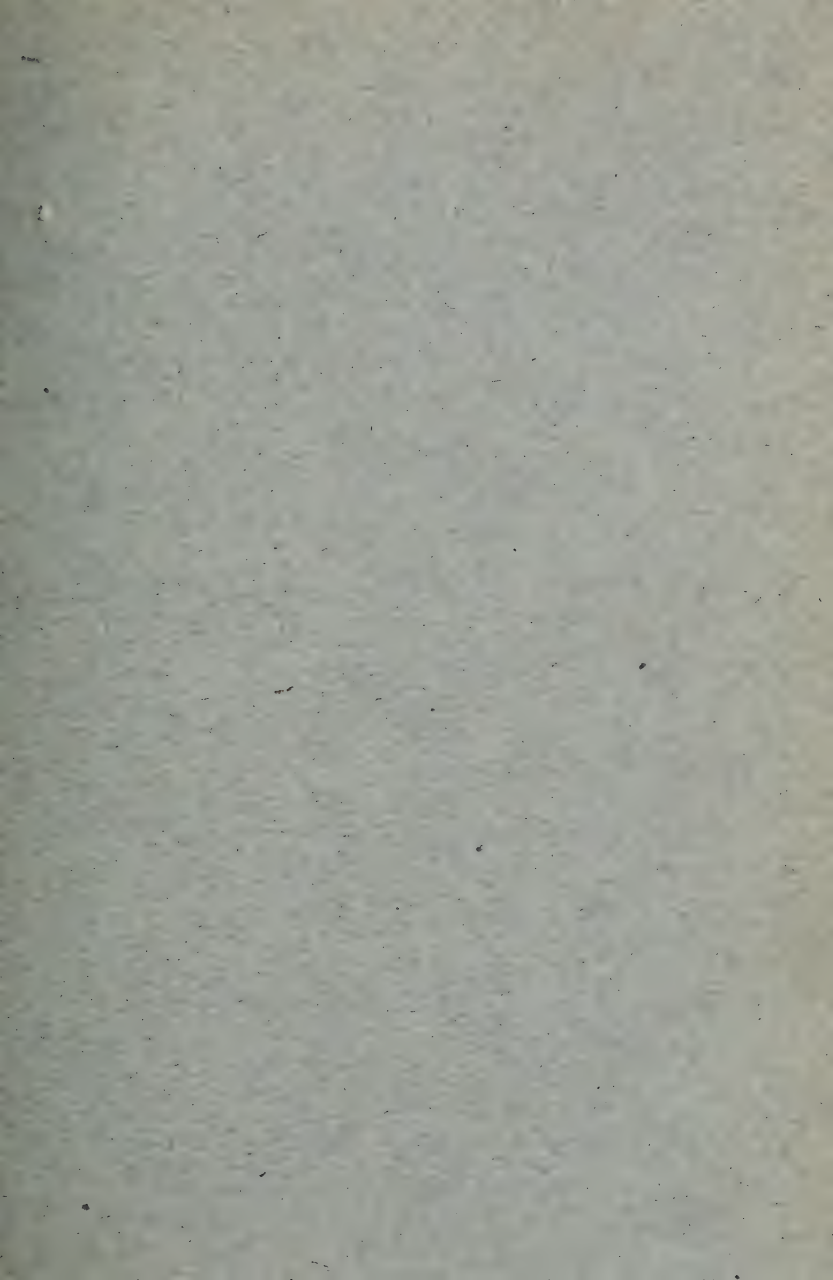
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Volume 11 - Number 1

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BOULDER, COLORADO, MARCH, 1911

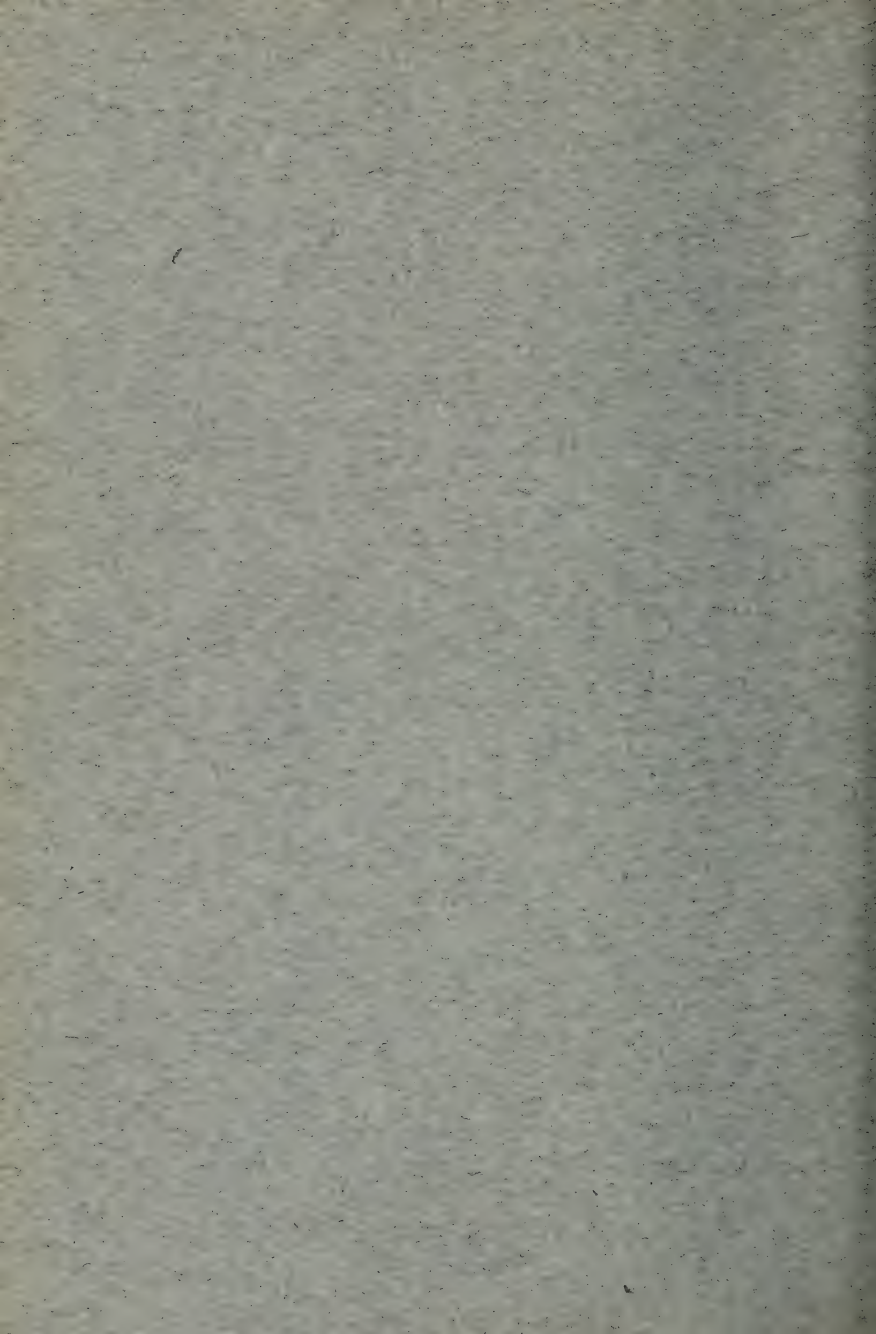
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Published Quarterly by the Regents of the University of Colorado

*Entered at the Post Office, Boulder, Colorado, as second-class mail matter*



CATALOGUE, 1910-1911



# University of Colorado

## BULLETIN

*Volume 11 - Number 1*

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BOULDER, COLORADO, MARCH, 1911

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CATALOGUE, 1910-1911





*The*  
University of Colorado  
Catalogue, 1910-1911

With  
Announcements for  
1911-1912



*Boulder, Colorado, March, 1911*

*HP*



New  
Athletic  
Field

Scale of Feet  
0 50 100 200 300 500

Boulder Creek

12<sup>TH</sup> ST.

BROADWAY

PLEASANT ST.

PENNSYLVANIA

AVE.

PENNA AVE.

12<sup>TH</sup> ST.

13<sup>TH</sup> ST.

COLLEGE

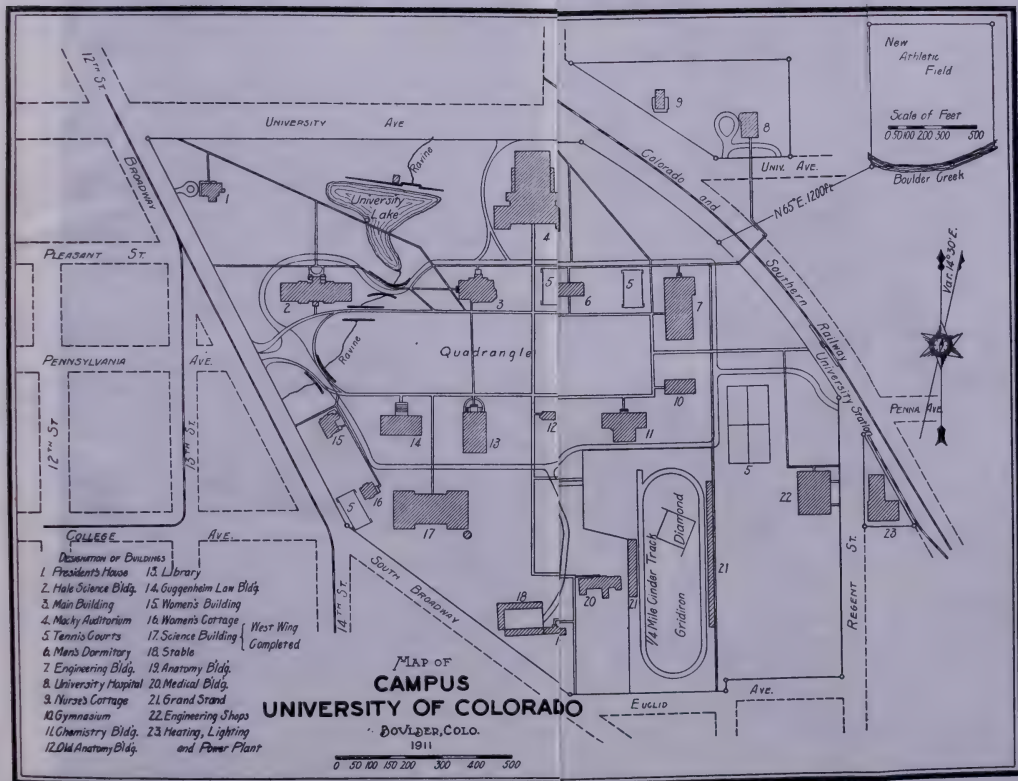
AVE. 23

Var. 14° 30' E.



DESIGNATION OF BUILDINGS

- |                        |                              |
|------------------------|------------------------------|
| 1. President's House   | 13. Library                  |
| 2. Hale Science Bldg.  | 14. Guggenheim Law           |
| 3. Main Building       | 15. Women's Building         |
| 4. Macky Auditorium    | 16. Women's Cottage          |
| 5. Tennis Courts       | 17. Science Building         |
| 6. Men's Dormitory     | 18. Stable                   |
| 7. Engineering Bldg.   | 19. Anatomy Bldg.            |
| 8. University Hospital | 20. Medical Bldg.            |
| 9. Nurses Cottage      | 21. Grand Strand             |
| 10. Gymnasium          | 22. Engineering Shop         |
| 11. Chemistry Bldg.    | 23. Heating, Light and Power |
| 12. Old Anatomy Bldg.  |                              |









# ANNOUNCEMENTS

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1911.

- Jan. 18, Wednesday.... Meeting of Board of Regents.  
Jan. 30, Monday..... Second Semester begins.  
Feb. 12, Sunday..... Lincoln's Birthday.  
Feb. 22, Wednesday.... Washington's Birthday (Holiday).  
March 25, Saturday to  
April 2, Sunday..... Spring Recess.  
April 19, Wednesday... Meeting of Board of Regents.  
April 21, Friday..... Arbor Day (Holiday).  
                                    Giffin Prize Debate.  
May 20, Saturday..... High-School Day.  
May 30, Tuesday..... Decoration Day (Holiday).  
June 2, Friday..... All examinations completed.  
June 3, Saturday.... Phi Beta Kappa Exercises.  
                                    Sigma Xi Exercises.  
June 4, Sunday..... Baccalaureate Address.  
                                    Annual Address before the Christian  
                                    Associations.  
June 5, Monday..... Senior Class Play.  
June 6, Tuesday..... Meeting of Board of Regents.  
                                    Class Day Exercises and Parade.  
                                    President's Reception.  
                                    Alumni Exercises and Reception.  
                                    Senior Promenade.  
June 7, Wednesday... Commencement.  
                                    Alumni Banquet.  
June 8, Thursday..... Summer Vacation begins.  
June 13 to July 29..... Summer School.  
Sept. 6, Wednesday... Meeting of Board of Regents.

## ACADEMIC YEAR, 1911-1912

Sept. 11, Monday.....First Semester begins; Assembly of Students  
at 11:00; Examinations and Presentation  
of Certificates; Registration; (Registration  
begins Friday, Sept. 8).

Oct. 12, Thursday.....Columbus Day (Holiday).

Nov. 8, Wednesday....Meeting of Board of Regents.

Nov. 23, Thursday.....Thanksgiving Day (Holiday).

Nov. 24, Friday.....(Holiday.)

Dec. 23, Saturday to

Jan. 7, Sunday.....Winter Recess.

## 1912.

Jan. 17, Wednesday....Meeting of Board of Regents.

Jan. 29, Monday.....Second Semester begins.

Feb. 12, Monday.....Lincoln's Birthday (Holiday).

Feb. 22, Thursday.....Washington's Birthday (Holiday).

March 23, Saturday, to

March 31, Sunday.....Spring Recess.

April 17, Wednesday...Meeting of Board of Regents.

April 19, Friday.....Arbor Day (Holiday).

Giffin Prize Debate.

May 18, Saturday.....High-School Day.

May 30, Thursday.....Decoration Day (Holiday).

May 31, Friday.....All examinations completed.

June 1, Saturday.....Phi Beta Kappa Exercises.

Sigma Xi Exercises.

June 2, Sunday.....Baccalaureate Address.

Annual Address before the Christian  
Associations.

June 3, Monday.....Senior Class Play.

June 4, Tuesday.....Meeting of Board of Regents.

Class Day Exercises and Parade.

President's Reception.

Alumni Exercises and Reception.

Senior Promenade.

June 5, Wednesday...Commencement.

Alumni Banquet.

June 6, Thursday.....Summer Vacation begins.

June 17 to July 27.....Summer School.

Sept. 4, Wednesday...Meeting of Board of Regents.

## BOARD OF REGENTS

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|                           |                     |                    |
|---------------------------|---------------------|--------------------|
| CHARLES R. DUDLEY, LL.B.  | .....               | <i>Denver</i>      |
|                           | Term expires, 1912. |                    |
| JOSEPH C. BELL, LL.B.     | .....               | <i>Trinidad</i>    |
|                           | Term expires, 1912. |                    |
| RALPH TALBOT, B.A.        | .....               | <i>Denver</i>      |
|                           | Term expires, 1914. |                    |
| ETHELBERT B. ADAMS, LL.B. | .....               | <i>Telluride</i>   |
|                           | Term expires, 1914. |                    |
| WILLIAM J. KING.          | .....               | <i>Villa Grove</i> |
|                           | Term expires, 1916. |                    |
| ANNA L. WOLCOTT.          | .....               | <i>Denver</i>      |
|                           | Term expires, 1916. |                    |

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## OFFICERS OF THE BOARD

|                    |       |         |       |           |
|--------------------|-------|---------|-------|-----------|
| JAMES H. BAKER.    | ..... | Boulder | ..... | President |
| FRANK H. WOLCOTT.  | ..... | Boulder | ..... | Secretary |
| CHARLES H. CHENEY. | ..... | Boulder | ..... | Treasurer |

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## COMMITTEES OF THE BOARD

EXECUTIVE—Messrs. Dudley, Bell, Baker.

AUDITING—Mr. Adams, Miss Wolcott, Mr. Baker.

BUILDINGS AND GROUNDS—Messrs. Bell, Dudley, Baker.

FINANCE—Messrs. Talbot, Adams.

LIBRARY—Messrs. King, Talbot, Barnes.

INSTRUCTORS—Messrs. Baker, Dudley, Talbot.

## \*ADVISORY BOARD

|                                  | Town.                   | County.            |
|----------------------------------|-------------------------|--------------------|
| GEORGE A. GARARD.....            | <i>Brighton</i>         | <i>Adams</i>       |
|                                  |                         | <i>Arapahoe</i>    |
| ALLEN J. NOSSAMAN, M.D.....      | <i>Pagosa Springs</i>   | <i>Archuleta</i>   |
| WILLIAM HOOKER.....              | <i>Springfield</i>      | <i>Baca</i>        |
| HARRY L. LUBERS.....             | <i>Las Animas</i>       | <i>Bent</i>        |
| THOMAS BUTLER.....               | <i>Longmont</i>         | <i>Boulder</i>     |
| GEORGE H. CURFMAN, M.D.....      | <i>Salida</i>           | <i>Chaffee</i>     |
| E. P. HICKMAN.....               | <i>Cheyenne Wells</i>   | <i>Cheyenne</i>    |
| WILLIAM C. HOOD.....             | <i>Georgetown</i>       | <i>Clear Creek</i> |
| ALBERT A. STOVER.....            | <i>Idaho Springs</i>    | <i>Clear Creek</i> |
| FREDERICK W. SWANSON.....        | <i>Alamosa</i>          | <i>Conejos</i>     |
| CHARLES GROENENDYKE.....         | <i>San Luis</i>         | <i>Costilla</i>    |
| JOHN H. LEARY.....               | <i>Westcliffe</i>       | <i>Custer</i>      |
| BURTON P. SMITH.....             | <i>Delta</i>            | <i>Delta</i>       |
| GUSTAVE C. BARTELS.....          | <i>Denver</i>           | <i>Denver</i>      |
| WILLIAM H. BRYANT.....           | <i>Denver</i>           | <i>Denver</i>      |
| CHARLES L. DICKERSON.....        | <i>Denver</i>           | <i>Denver</i>      |
| CLAYTON C. DORSEY.....           | <i>Denver</i>           | <i>Denver</i>      |
| IRVING HALE.....                 | <i>Denver</i>           | <i>Denver</i>      |
| HORACE N. HAWKINS.....           | <i>Denver</i>           | <i>Denver</i>      |
| A. DUPONT PARKER.....            | <i>Denver</i>           | <i>Denver</i>      |
| FRANK E. SHEPARD.....            | <i>Denver</i>           | <i>Denver</i>      |
| JOHN W. SPRINGER.....            | <i>Denver</i>           | <i>Denver</i>      |
| THOMAS B. STEARNS.....           | <i>Denver</i>           | <i>Denver</i>      |
| CHARLES MACALLISTER WILLCOX..... | <i>Denver</i>           | <i>Denver</i>      |
|                                  |                         | <i>Dolores</i>     |
| JOHN ANDERSON.....               | <i>Castle Rock</i>      | <i>Douglas</i>     |
| JAMES DILTS.....                 | <i>Eagle</i>            | <i>Eagle</i>       |
| WILLIAM D. REILLY.....           | <i>Kiowa</i>            | <i>Elbert</i>      |
| JOSEPH F. HUMPHREY.....          | <i>Colorado Springs</i> | <i>El Paso</i>     |
| ROBERT KERR.....                 | <i>Colorado Springs</i> | <i>El Paso</i>     |
| CLYDE C. DAWSON.....             | <i>Canon City</i>       | <i>Fremont</i>     |
| JAMES G. JOHNSTON.....           | <i>Florence</i>         | <i>Fremont</i>     |

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\*The members of the Advisory Board are appointed by the Regents for a term of one year. The service is without compensation. Annual meeting of the Advisory Board, at the University, Tuesday and Wednesday of Commencement Week.

|                                | Town.                  | County.           |
|--------------------------------|------------------------|-------------------|
| BARNETTE T. NAPIER.....        | Glenwood Springs.....  | Garfield          |
| CHASE WITHROW.....             | Central City.....      | Gilpin            |
| DAVID P. HOWARD.....           | Sulphur Springs.....   | Grand             |
| JOHN A. LEHRITTER.....         | Gunnison.....          | Gunnison          |
| BENJAMIN F. CUMMINGS, M.D..... | Lake City.....         | Hinsdale          |
| CHARLES HAYDEN.....            | Walsenburg.....        | Huerfano          |
| THOMAS D. BAIRD, M.D.....      | Walsenburg.....        | Huerfano          |
| OWEN S. CASE.....              | Walden.....            | Jackson           |
| WILLIAM G. SMITH.....          | Golden.....            | Jefferson         |
| RAYMOND MILLER.....            | Galatea.....           | Kiowa             |
| WILLIAM D. SELDER.....         | Burlington.....        | Kit Carson        |
| CHARLES CAVENDER.....          | Leadville.....         | Lake              |
| CHARLES A. PIKE.....           | Durango.....           | La Plata          |
| FRANK J. ANNIS.....            | Fort Collins.....      | Larimer           |
| EDWARD H. DAY.....             | Trinidad.....          | Las Animas        |
| ARCHIBALD MCINTYRE.....        | Hugo.....              | Lincoln           |
| WILLIAM L. HAYS.....           | Sterling.....          | Logan             |
| HORACE T. DELONG.....          | Grand Junction.....    | Mesa              |
| ALBERT L. MOSES.....           | Creede.....            | Mineral<br>Moffat |
| LEONARD H. CLARK, M.D.....     | Mancos.....            | Montezuma         |
| ABIJAH JOHNSON, M.D.....       | Montrose.....          | Montrose          |
| MONCELLUS L. MORE.....         | Fort Morgan.....       | Morgan            |
| ROBERT W. PATTERSON.....       | La Junta.....          | Otero             |
| WILLIAM W. ROWAN, M.D.....     | Ouray.....             | Ouray             |
| CHARLES A. WILKIN.....         | Fairplay.....          | Park              |
| R. G. McKIBBEN.....            | Holyoke.....           | Phillips          |
| EWING C. GUTHRIE, M.D.....     | Aspen.....             | Pitkin            |
| JOHN C. HORN.....              | Lamar.....             | Prowers           |
| ALVA ADAMS.....                | Pueblo.....            | Pueblo            |
| HUME LEWIS.....                | Pueblo.....            | Pueblo            |
| JAMES LYTTLE.....              | Meeker.....            | Rio Blanco        |
| ROBERT G. BRECKENRIDGE.....    | Monte Vista.....       | Rio Grande        |
| BENJAMIN F. NIESZ.....         | Steamboat Springs..... | Routt<br>Saguache |
| CLARENCE O. FINCH.....         | Silverton.....         | San Juan          |
| STEPHEN A. BAILEY.....         | Telluride.....         | San Miguel        |
| BERTRAND D. PARKER, JR.....    | Julesburg.....         | Sedgwick          |
| WILLIAM F. FORMAN.....         | Breckenridge.....      | Summit            |



|                         | Town.                      | County.           |
|-------------------------|----------------------------|-------------------|
| GRIFFITH R. LEWIS.....  | <i>Cripple Creek</i> ..... | <i>Teller</i>     |
| NELSON FRANKLIN.....    | <i>Victor</i> .....        | <i>Teller</i>     |
| HAROLD D. THOMPSON..... | <i>Cripple Creek</i> ..... | <i>Teller</i>     |
| EGBERT MORE.....        | <i>Akron</i> .....         | <i>Washington</i> |
| GEORGE D. STATLER.....  | <i>Greeley</i> .....       | <i>Weld</i>       |
| THOMAS B. GROVES.....   | <i>Wray</i> .....          | <i>Yuma</i>       |

# COLLEGES AND SCHOOLS OF THE UNIVERSITY

The Colleges and Schools of the UNIVERSITY OF COLORADO are the following:

- I. COLLEGE OF LIBERAL ARTS:  
Courses leading to the degree B.A.
- II. COLLEGE OF COMMERCE:  
Courses leading to the degree B.A. and special certificate.
- III. COLLEGE OF EDUCATION:  
Courses leading to the degree B.A. and special certificate.
- IV. GRADUATE SCHOOL, leading to the degrees M.A. and Ph.D.; also  
M.S., C.E., E.E., M.E.
- V. COLLEGE OF ENGINEERING:  
*Civil Engineering*, leading to the degree B.S. (C.E.).  
*Electrical Engineering*, leading to the degree B.S. (E.E.).  
*Mechanical Engineering*, leading to the degree B.S. (M.E.).  
*Chemical Engineering*, leading to the degree B.S. (Ch. E.).
- VI. SCHOOL OF MEDICINE, leading to the degree M.D.
- VII. SCHOOL OF LAW, leading to the degree LL.B.
- VIII. SUMMER SCHOOL.

## \*GENERAL FACULTY

---

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Dean of the Graduate School; Professor of Comparative and  
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Professor of Surgery.

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Professor of Mathematics.

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Dean of the Law School and Professor of American Constitutional  
Law, *Emeritus*.

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Professor of Law.

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Professor of Physiology.

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Dean of the College of Liberal Arts; Professor of Latin.

GEORGE H. CATTERMOLLE, M.D.,  
Professor of Medicine (Pediatrics).

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\*Professors, Assistant Professors, Lecturers and Instructors are arranged in the order of appointment. Assistants rank as their departments. Within the general Faculty are organized the Advisory Council, Senate, and Faculties of the several colleges and schools.

\*CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

S. GRISWOLD MORLEY, Ph.D.,  
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JOHN D. FLEMING, B.A., LL.B., LL.D.,  
Dean of the Law School; Professor of Law; Associate Judge of  
Practice Court.

---

\*On leave of absence, 1910-1911.

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Professor of Medicine (Clinical Medicine).

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Mathematics.

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Professor of Surgery (Gynecology and Abdominal Surgery).

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Professor of Laryngology and Rhinology.

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Professor of Surgery.

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Professor of Medicine.

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Professor of Surgery (Clinical Surgery).



CHARLES F. SHOLLENBERGER, M.D.,  
Professor of Medicine (Pediatrics).

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Professor of Chemistry (Toxicology).

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Professor of Medicine.

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Professor of Therapeutics.

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Professor of Obstetrics.

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Professor of Surgery (Gynecology and Abdominal Surgery).

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Professor of Physiology.

MELVILLE BLACK, M.D.,  
Professor of Ophthalmology.

JAMES M. BLAINE, M.D.,  
Professor of Dermatology and Venereal Diseases.

WILLIAM C. MITCHELL, M.D.,  
Professor of Bacteriology.

DAVID H. COOVER, M.D.,  
Professor of Ophthalmology.

SAMUEL B. CHILDS, B.A.,  
Professor of Anatomy.

JAMES H. PERSHING, B.A.,  
Professor of Medical Jurisprudence.

†SAMUEL D. HOPKINS, M.D.,  
Professor of Neurology and Psychiatry.

---

†Died February 4, 1911.

WILLIAM C. BANE, M.D.,  
Professor of Otology.

GEORGE H. STOVER, M.D.,  
Professor of Roentgenology.

F. GILLET BYLES, M.A., M.D.,  
Professor of Hygiene.

JAMES C. TODD, B.Ph., M.D.,  
Secretary of the School of Medicine, Boulder Division; Professor of  
Pathology.

JOSEPH C. HUTCHISON, M.S., M.D.,  
Professor of Obstetrics.

\*RALPH D. CRAWFORD, M.A.,  
Assistant Professor of Geology.

DAVID R. JENKINS, E.E.,  
Assistant Professor of Electrical Engineering

CLEMENT C. WILLIAMS, C.E.,  
Assistant Professor of Civil Engineering.

WALTER W. REED, M.D.,  
Assistant Professor of Obstetrics.

S. ANTOINETTE BIGELOW, M.A.,  
Assistant Professor of Literature; Dean of Womer.

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Assistant Professor of Education.

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Lecturer on Common Law Pleading.

ROBERT S. MORRISON,  
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CHARLES S. THOMAS, LL.B.,  
Lecturer on Law of Evidence.

LUCIUS M. CUTHBERT, M.A., LL.B.,  
Lecturer on Roman Law.

JOHN A. RINER, LL.B.,  
Lecturer on International Law.

---

\*On leave of absence, 1910-1911.

CHARLES D. HAYT,  
Lecturer on Law of Taxation.

ERNEST L. WILLIAMS, LL.B.,  
Lecturer on Appellate Procedure.

JAMES W. MCCREERY,  
Lecturer on Law of Irrigation and Water Rights.

JOHN E. ROBINSON,  
Lecturer on Bankruptcy.

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Lecturer on Genito-Urinary Diseases.

FORDYCE P. CLEAVES, M.A.,  
Instructor in Oratory.

CHARLES B. DYKE, M.A.,  
Instructor in Education.

FRED G. FOLSOM, B.A., LL.B.,  
Instructor in Law; Judge of Practice Court.

EDWARD B. TROVILLION, M.D.,  
Instructor in Anatomy.

WILLIAM A. JOLLEY, M.D.,  
Instructor in Pharmacology.

WILLARD J. WHITE, M.A., M.D.,  
Instructor in Medical Jurisprudence.

JACOB CAMPBELL, M.D.,  
Instructor in Surgery.

JOHN ANDREW, B.A., M.D.,  
Instructor in Anatomy.

FRANK R. SPENCER, B.A., M.D.,  
Instructor in Laryngology and Rhinology; Ophthalmology and Otology.

\*MARGARET S. CARHART, M.A.,  
Instructor in English.

---

\*On leave of absence, 1910-1911.

JOSEPH L. KINGSBURY, B.A.,

Instructor in History.

WHITFORD H. SHELTON, M.A.,

Instructor in Romance Languages.

WILFRED W. ROBBINS, M.A.,

Instructor in Biology.

HARRY A. CURTIS, B.S. (Ch.E.), M. A.,

Instructor in Chemistry.

ADOLPH G. PIERROT, Ph.B.,

Instructor in English.

WILLIAM R. BRACKETT, B.A.,

Instructor in Physics.

GEORGE L. SULLIVAN, M.E.,

Instructor in Mechanical Engineering.

MILDRED S. MCARTHUR, M.A.,

Instructor in German.

DAVID J. MACDONALD, M. A.,

Instructor in Education.

GUY W. SMITH, B.S. (E.E.), M.S.,

Instructor in Engineering Mathematics.

EDWARD C. STOCKER, B.S. (C.E.),

Instructor in Civil Engineering.

OLLISON CRAIG, B.S., (M.E.),

Instructor in Mechanical Engineering.

HARLAND C. WOODS, B. S. (C.E.),

Instructor in Engineering Drawing.

CLAY E. GIFFIN, B.A., M.D.,

Instructor in Surgery.

HENRY S. DENISON, B.A., M.D.,

Instructor in Medicine.

CARSON GILLASPIE, M.D.,

Instructor in Anatomy.

EASLEY S. JONES, M.A.,

Instructor in English.

ELVA COOPER, M.A.,

Instructor in Mathematics.

ARNOLD J. LIEN, M.A.,  
Instructor in Economics.

F. M. HANDY, B.A.,  
Instructor in Geology.

WILLIAM V. CASEY,  
Instructor in Education.

MARGARET L. WHEELER, M.A.,  
Instructor in English.

JOSEPH B. MORRILL, B.S. (E.E.),  
Instructor in Electrical Engineering.

SIEBELT L. SIMMERING, B.S. (M.E.),  
Instructor in Mechanical Engineering.

JOHN W. AMESSE, M.D.,  
Instructor in Medicine.

WALTER W. WASSON, B.A., M.D.,  
Instructor in Anatomy.

GERARD L. C. M. VAN ROSSEN HOOGENDIJK, Ph.D.,  
Instructor in Chemistry.

CLEOPHILE BELL, M.A.,  
Assistant in Literature.

ETHEL R. FORD, B.A.,  
Assistant in Literature.

GLADYS E. SHUFELT, M.A.,  
Assistant in Mathematics.

HELEN O. COATES,  
Assistant in Romance Languages.

LOUISE L. TOURTELLOTT, B.A.,  
Assistant in Biology.

WARREN E. WATKINS, B.S.,  
Assistant in Biology.

LORENA UNDERHILL, Ph.B.,  
Assistant in Philosophy.

CHARLES F. POE,  
Assistant in Chemistry.

WINTHROP W. LEACH,  
Assistant in Chemistry.

PAUL M. DEAN, B.A.,  
Assistant in Chemistry.

PHILIP G. WORCESTER, B.A.,  
Assistant in Geology.

ROY M. BUTTERS, B.A.,  
Assistant in Geology.

COLIN B. GOODYKOONTZ,  
Assistant in History.

FREDERICK V. BLISS, B.S. (E.E.),  
Assistant in Physics and in Engineering Mathematics.

CORNELIUS J. MARVIN,  
Assistant in Physics.

BULAH STEARNS-MACAULAY, B.A.,  
Assistant in English.

FERD J. LOCKHART,  
Assistant in English.

RUTH M. SHELEDY, B.A.,  
Assistant in German.

MARY E. LAKENAN, B.A.,  
Assistant in Psychology.

WHITNEY C. HUNTINGTON, B.S. (C.E.),  
Assistant in Civil Engineering.

CARL M. DUFF, B.S. (C.E.),  
Assistant in Engineering Mathematics and in Engineering Drawing.

ARTHUR MARGOT,  
Assistant in Bacteriology.

EDWARD R. MUGRAGE, M.A.,  
Assistant in Pathology.

FRANCIS J. EVANS,  
Assistant in Pathology.

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FRED E. HAGEN, B.A.,  
Secretary and Registrar.  
WALTER L. BARNES, Ph.B.,  
Acting Librarian.



FAITH E. FOSTER,  
Assistant Librarian in Charge.

C. HENRY SMITH, Ph.B.,  
Assistant Librarian.

ELIZABETH M. PHILLIPS,  
Assistant Librarian.

C. BELMONT PRESTON,  
Assistant in Library.

JACOB C. PRESTON,  
Assistant in Library.

WILLIAM B. WALDO,  
Law Librarian.

OLIVER C. WILSON, B.A.,  
Assistant in Law Library.

EUGENE A. BOND,  
Assistant in Law Library.

FRANK R. CASTLEMAN, B.S.,  
Director of Physical Training and Athletics.

EARL E. WRIGHT,  
Assistant in Gymnasium.

MARGARET L. JOHNSON, M.D.,  
Physical Examiner for Women in Gymnasium and Instructor.

ELVA COOPER, M.A.,  
Assistant in Gymnasium.

JOSEPH KLEMME,  
Superintendent of Buildings and Grounds.



# GENERAL STATEMENT

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## ESTABLISHMENT

The Constitution of the State of Colorado provides for the election, by the people at large, of a Board of Regents of the State University, and defines its duties as follows: "*The Board of Regents shall have the general supervision of the University, and the exclusive control and direction of all funds of, and appropriations to, the University.*" The President of the University is *ex officio* a member of the Board of Regents and its presiding officer. The laws providing for the government and maintenance of the University were passed by the General Assembly of Colorado, March 15, 1877. Its object, as defined by that act, is, "*To provide the best and most efficient means of imparting to young men and women, on equal terms, a liberal education and thorough knowledge of the different branches of literature, the arts and sciences, with their varied applications.*"

## HISTORY

The University of Colorado was incorporated by an act of the Territorial Legislature of 1861, and the location fixed at Boulder. In 1871 three public-spirited citizens gave the University fifty-two acres of land adjoining the city. In 1874, the Territorial Legislature appropriated \$15,000, and the citizens of Boulder contributed a like sum in cash. In 1875, Congress set apart and reserved seventy-two sections of the public lands for the support of the State University. In 1876 the Constitution of Colorado provided that upon its adoption the University at Boulder should become an institution of the State, thus entitling it to lands appropriated by Congress, and further made provision for the management and control of the University. The first General Assembly of the State provided for its permanent support by the levy of a tax of one-fifth of a mill upon the property of the State; also, for a fund to be secured by the sale of lands granted by the United States. In 1903, the General Assembly increased the annual levy from one-fifth to two-fifths of a mill.

The Institution was opened September, 1877, with two departments, Preparatory and College. The Medical School was opened in 1883. In September, 1892, a Law School was established, Graduate courses were first formally offered, and the gradual withdrawal of the Preparatory classes from the University was begun. The College of Engineering was opened in 1893. The Summer School was established in 1904. In September, 1906, a College of Commerce was established. The Preparatory School was discontinued in 1907. The Department of Education was organized as a College of Education in 1908.

The University is supported by the proceeds from a two-fifths mill tax, and by special appropriations.

### LOCATION

The University is located at Boulder, a thriving city of twelve thousand inhabitants, about thirty miles north from Denver. The campus is situated on an elevation on the south side of the city and commands to the east a fine view of Boulder Valley, dotted with numerous small lakes, a rich agricultural and fruit-raising district. To the west a mile distant are the foothills, the boldest and highest of the range, and beyond is seen the ever snow-capped summit of Arapahoe Peak. In the canons and along the mountain roads, the scenery is grand and beautiful. To the north is Long's Peak, rising nearly fifteen thousand feet above sea level, while to the south is a series of beautiful mesas extending from the foothills. A trip on the Denver, Boulder & Western Railroad, extending thirty miles into the mountains, is a favorite excursion for tourists. The healthfulness of the climate of Colorado is well known. The city is located on that plateau east of the Rocky Mountains which, as stated in the *Journal of Outdoor Life*, "has the finest climate in the world." The dry air and almost continuous succession of bright, cloudless days make Boulder a very desirable location for residence. Many young men and women who have been compelled to leave college both in the East and South on account of ill health, are able to pursue their studies here without interruption. The altitude of Boulder is 5,335 feet above sea level.

### CHAUTAUQUA

The Colorado Chautauqua is located in Boulder. The fourteenth session will open July 4 and continue until August 14. A summer

school is connected with the Chautauqua. Lecturers and instructors of national reputation are employed. The previous sessions have been remarkably successful in point of attendance and excellence of programme. The secretary is Mr. F. A. Boggess, Boulder, Colo.

## BUILDINGS

**HEATING, LIGHTING AND POWER PLANT**—A new plant, furnishing heat, light and power for the campus has been recently finished east of the Shops Building. It contains a boiler room forty by seventy-four feet and an engine room fifty by eighty-six feet. The structure is built of stone. A concrete tunnel 1,700 feet in length has been built from the power plant to distributing points on the campus. This tunnel contains all pipes and wires necessary for heating, lighting and power purposes.

**MACKY AUDITORIUM**—Work is in progress on the Macky Auditorium. The funds for the erection of this building were provided by the will of the late Andrew J. Macky. The building is two hundred and thirty-four feet by two hundred and sixty-four feet in plan. Stone with lighter stone trimmings is being used. The estimated cost of the building is nearly \$300,000. The main auditorium will seat 3,000 people and there will be three minor rooms in the wings for smaller audiences. The administrative offices will be located temporarily in one wing. The basement under the whole structure will be finished to accommodate large University and student functions.

**LIBRARY BUILDING**—The Library Building is a two-story structure, built of gray brick and white sandstone. The central portion is sixty-five by one hundred and fifteen feet. Two wings are to be added.

**WOODBURY HALL**—This building is three stories in height above the basement, and is constructed of gray and red sandstone. It is heated by steam and supplied with hot and cold water, bath rooms, etc.

The rooms are in suites of three rooms each—a sitting room for study, twelve by fourteen feet, and two bed rooms, each ten by twelve feet, with commodious closets.

**WOMAN'S BUILDING**—The Woman's Building is a two-story brick structure, containing the offices of the Dean of Women, the Woman's

League and the Young Women's Christian Association. There are also a large club room and a kitchen. The upper floor contains twelve bed-rooms.

**WOMAN'S COTTAGE**—This is a two-story brick building, containing twelve rooms.

**GYMNASIUM**—The Gymnasium Building is of such dimensions that it may be used on occasions as a general assembly hall. The building is well heated, ventilated and lighted, and contains a large exercise room, dressing rooms, shower baths, lockers, etc. It is equipped with the usual appliances.

**PRESIDENT'S HOUSE**—This is a two-story brick house of ten rooms.

**MAIN BUILDING**—The Main Building is a four-story brick structure, containing lecture and recitation rooms for the College of Liberal Arts, the administrative offices, the auditorium, and the art rooms.

**OLD ANATOMY BUILDING**—This building is a two-story brick structure used by the College of Liberal Arts.

**HALE SCIENCE BUILDING**—The Hale Science Building is a four-story building of stone, sixty by one hundred feet in plan, with two wings, each fifty-one by fifty-two feet in area and two stories high. The second or main floor in the wings contains two lecture rooms each with a seating capacity of over two hundred students. The entire lower story is occupied by the physics department; the second story of the central part by the mathematical and romance languages departments; the third by the biological and zoological departments.

**CHEMISTRY BUILDING**—The Chemistry Building is constructed of red pressed brick, trimmed with red sandstone, and contains two stories and a basement. It is forty by one hundred and twenty-five feet in plan with a wing forty by sixty feet.

**NEW SCIENCE AND MUSEUM BUILDING**—One wing of a Science and Museum Building has been erected during the past year. The plan of the entire building is two hundred and twenty-five by one hundred and twenty-one feet. This is to be devoted to Geology, Biology, and the Museum.



**ENGINEERING BUILDING**—A two-story brick building with basement is devoted to the use of the College of Engineering. The building is one hundred and seventy-seven by eighty-five feet in plan. It is designed with special reference to engineering work, and is well fitted with machinery and instruments.

**SHOPS BUILDING**—The Shops Building is located at the extreme east end of the campus, covering a space ninety-three by one-hundred and twenty-two feet. It is built of red brick and sandstone. The first, or front section, is two stories, with wood shops on the first floor and drawing rooms on the second floor; the remaining portion is one-story, containing the machine shop, forge shop, and foundry. All the rooms are well lighted, heated, and ventilated, and the most modern construction is used throughout.

**MEDICAL BUILDING**—The Medical Building is a brick structure, consisting of a central portion and three wings. It contains lecture rooms and laboratories for pathology, bacteriology, practical physiology and pharmacology. Adjoining is a temporary structure for anatomy.

**MEDICAL BUILDING (In Denver)**—The Medical Building in Denver is a three-story and basement stone building, located at the corner of Thirteenth and Welton Streets. It is exceptionally well located for its purpose. It contains two lecture rooms, laboratories for work in pathology and the various branches of clinical diagnosis, smaller rooms for section and demonstration work, and rooms for the several departments of the Dispensary.

**HOSPITAL**—The Hospital is a three-story brick building, situated on the bluff overlooking the creek, city and surrounding country. In plan and equipment it is in every way modern and complete.

**NURSES' HOME**—The Nurses' Home is a one-story frame cottage, situated west of the Hospital. It contains eight rooms, and is well adapted in every way to its purpose.

**GUGGENHEIM LAW BUILDING**—Donated by Senator Simon Guggenheim. This is a three-story building of gray brick and gray sandstone, one hundred and fifteen by fifty-two feet in plan, erected in 1909. It contains class rooms, offices, moot court room and library, and is planned exclusively for the School of Law.

## THE UNIVERSITY LIBRARY

The Library was founded by cash donations for the purchase of books placed at the disposal of the University by Mr. Charles G. Buckingham, of Boulder. It now occupies the central portion of the Library Building, which is provided with seminary rooms, alcoves for special study, and is in every respect adapted to the increasing activity of the library in University work. Two large wings will be added to the building. The Library contains 56,000 bound volumes, besides a large number of unbound pamphlets; works of practical and permanent worth are being constantly added. The collection is a choice one, largely the selection of the faculty, whose aim has been to supply the various departments with a liberal equipment of practical working material. The building is open to all students and to the public as a reference library, every day, except Sunday, from 7:45 a. m. to 5:30 p. m., and from 7:00 to 10:00 in the evening throughout the academic year, except Friday and Saturday evenings when the closing hour is 9:00. A Librarian, two Assistant Librarians, and two student assistants are employed to care for the books and aid students and patrons in their proper use.

General, technical and professional libraries are classed as a unit by the decimal system of Mr. Dewey. All books are shelved in a continuous order of classification, while a relative location and alphabetical order are secured by use of the Cutter notation. Books are catalogued on the dictionary plan, in a single alphabet, by author, subject, and when of sufficient importance, by title. Upwards of 80,000 cards, with brief bibliography, and, in many instances, full analytical contents, with author and subject duplications, are accessible for student reference.

In the alcoves of each department are appliances for reference work, directly adjacent to the books. The students have direct access to all shelves and a dictionary catalogue. Students acquire, by this contact, facility with library ways, the inspiration of uninterrupted reference, and familiarity with literary surroundings.

The Librarian offers all new students of every department instruction in the use of the library, which enriches and facilitates the mastery of the other regular work of the curriculum. He gives familiar talks and practical drill under personal supervision, in the details of the use and purpose of classification, shelving, catalogues, indexes, manuals, books of reference, and bibliography.

Completed volumes of periodicals are bound to date. Poole's and other indexes of periodical and general literature are at hand to aid reference. Technical journals, not otherwise accessible, are also indexed in the card catalogue, and the bound volumes are shelved for reference as books in their respective departments.

Aside from the large files of complimentary periodicals and exchanges, the Library subscribes regularly for journals representing the latest and most scholarly research in every department.

#### PERIODICAL LIST FOR 1911.

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|----------------------------------|-----------------------------------|
| *Advocate of Peace.              | *American Medical Association.    |
| Allgemeine Musik Zeitung.        | Journal.                          |
| *American Academy of Medicine.   | American Monthly Review of        |
| Bulletin.                        | Reviews.                          |
| American Academy of Political    | *American Museum. Journal.        |
| and Social Science. Annals (and  | American Naturalist.              |
| Suppl.).                         | American Physical Education       |
| American Architect.              | Review.                           |
| American Catholic Review.        | American Political Science        |
| American Chemical Journal.       | Review.                           |
| *American Chemical Society.      | American Railway Engineering      |
| Journal.                         | and Maintenance of Way Asso-      |
| American College.                | ciation. Proceedings.             |
| American Economist.              | American School Board Journal.    |
| American Entomological Society.  | American Society for Testing      |
| Transactions.                    | Materials. Proceedings.           |
| *American Forestry.              | American Society of Civil Engi-   |
| American Geographical Society.   | neers. Transactions.              |
| Bulletin.                        | American Society of Mechanical    |
| American Historical Review.      | Engineers. Transactions.          |
| *American Industries.            | American Statistical Association. |
| American Institute of Electrical | Quarterly Publications.           |
| Engineers. Transactions.         | Anglia.                           |
| American Institute of Mining.    | Anglia. Beiblatt.                 |
| Engineers.                       | Annalen der Chemie. Liebig.       |
| American Journal of Anatomy.     | Annalen der Naturphilosophie.     |
| *American Journal of Archæology. | Annalen der Physik u. Chemie.     |
| American Journal of Mathematics. | (Weidemann).                      |
| American Journal of Medical      | Annalen der Physik und Beiblatt.  |
| Sciences.                        | Annales de Chemie et Physique.    |
| American Journal of Obstetrics   | Annales des Pontes et Chauses.    |
| and Medical Record.              | Annals of Botany.                 |
| American Journal of Philology.   | Annals of Mathematics.            |
| American Journal of Physiology.  | Annals of Surgery.                |
| American Journal of Psychology.  | *Applied Science.                 |
| American Journal of Science.     | Archiv der Mathematik und         |
| American Journal of Sociology.   | Physik.                           |
| American Law Review.             | Archiv fur die Gesamte Psychol-   |
| American Library Association.    | ogie.                             |
| Book List.                       | Archiv fur Pathologie, Anatomie   |
| American Library Association.    | u. Physiologie u. f. Klin. Med.   |
| Bulletin.                        | (Virchow.)                        |
| American Machinist.              | Archiv fur Systematische Philos-  |
| American Mathematical Monthly.   | ophie. (Berlin.)                  |
| American Mathematical Society.   | Archives de Psychologie.          |
| Bulletin.                        | Archives of Internal Medicine.    |
| American Mathematical Society.   | Archives of Psychology.           |
| Transactions.                    | Art Journal. (Lond.)              |

- Asiatic Quarterly Review.  
 Association of Engineering Societies. Journal.  
 \*Association of Railway Superintendents of Bridges and Buildings. Report.  
 Astrophysical Journal.  
 Athenæum.  
 Atlantic Monthly.  
 Auk.  
 Banker's Magazine. (N. Y.)  
 Berliner Klinische Wochenschrift. (Berlin.)  
 Beton und Eisen.  
 Biblical World.  
 Bibliotheque d'Ecole des Chartes.  
 Biological Bulletin. (Chic.).  
 Blackwoods Magazine.  
 Book Review Digest.  
 Bookseller.  
 Boston Medical and Surgical Journal.  
 Botanical Gazette.  
 Botanische Zeitung. Abteil. I-II.  
 Botanisches Centralblatt.  
 Brain.  
 British Association for the Advancement of Science.  
 British Medical Journal.  
 Bulletin de Correspondence Hellenique.  
 Bulletin of Bibliography.  
 Canadian Society of Civil Engineers. Transactions.  
 \*Canal Record. Panama.  
 \*Case and Comment.  
 Cassier's Magazine.  
 Cement and Engineering News.  
 Central Law Journal.  
 Centralblatt für Bakteriologie. Abteil. I. Original and Reference; Abteil II.  
 Century.  
 \*Chemical Abstracts.  
 Chemical News.  
 Chemical Society. (Lond.) Journal.  
 Chemische Weekblad.  
 Chemisches Centralblatt.  
 \*Chicago Dep't. of Health. Bulletin.  
 \*Christian Science Journal.  
 \*Christian Science Sentinel.  
 \*Christian Statesman.  
 \*Christian Student.  
 \*Civic Quarterly. (Univ. of Colo.)  
 Classical Journal of Classical Association of the Middle West and South.  
 Classical Philology.  
 Classical Quarterly.  
 Classical Review.  
 Classical Weekly.  
 \*Colorado Medicine.  
 \*Colorado Monthly. (Univ. of Colo.)  
 \*Colorado School Journal.  
 \*Columbia University Quarterly.  
 Commercial and Financial Chronicle.  
 Compressed Air.  
 Comptes Rendus.  
 Concrete Engineering.  
 Contemporary Review.  
 Cumulative Book Index.  
 \*Dental Record. (Lond.)  
 \*Dental Register. (Cincinnati.)  
 \*Denver Medical Times and Utah Medical Journal.  
 Deutsche Literaturzeitung.  
 Deutsche Medizinische Wochenschrift.  
 Deutsche Rundschau.  
 Deutschen Chemischen Gesellschaft. Berichte.  
 Dial.  
 \*Dominion Dental Journal. (Toronto.)  
 Early English Text Society.  
 Economic Bulletin.  
 Economic Geology.  
 Economic Journal. (Lond.)  
 Edinburgh Review.  
 Education.  
 Educational Review.  
 Electric Journal. (Pittsburgh.)  
 Electric Railway Journal.  
 Electrical Review. (Lond.)  
 Electrical Review and Western Electrician.  
 Electrical World.  
 Electrician. (Lond.)  
 Elektrochemische Zeitschrift. (Berlin.)  
 Electrocrafft.  
 Elektrotechnische Zeitschrift.  
 Elementary School Teacher. (Chic.)  
 Engineering.  
 Engineering—Contracting.  
 Engineering and Mining Journal.  
 Engineering Magazine and Index.  
 Engineering News.  
 Engineering Record.  
 \*Engineer's Society of Western Pennsylvania. Proceedings.  
 English Historical Review.  
 Englishche Studien.  
 Enseignement de Mathematique L' (Paris.)  
 Entomologists' Record and Journal of Variation.  
 \*Equity Series.  
 Fortnightly Review.  
 Forum.  
 Franklin Institute. Journal.  
 Gas Engine.  
 \*General Electric Review.  
 Genie Civil, Le.

- Geological Society of America.  
 Bulletin.  
 Green Bag.  
 Harper's Magazine.  
 Harvard Law Review.  
 Harvard Studies in Classical  
 Philology.  
 Hermes: zeitschrift fur klassische  
 Philologie.  
 Herrig's Archiv fur Studien  
 Sprache und Literaturen.  
 Hibbert Journal.  
 Historische Zeitschrift. (Munich.)  
 \*Hochschul-nachrichten.  
 Ice and Refrigeration.  
 Illuminating Engineer.  
 Illustrated London News.  
 Independent. (N. Y.)  
 Index Medicus.  
 Index to Legal Periodicals and  
 Law Library Journal.  
 Industrial Engineering.  
 Institute of Civil Engineers. Min-  
 utes of Proceedings.  
 Intermediaire des Mathematiens.  
 (Paris.)  
 International Clinics.  
 \*International Conciliation.  
 International Journal of Ethics.  
 International Labor Office.  
 Bulletin.  
 International Studio.  
 Jahresbericht Uberfortschritt. d.  
 klass. Alterumswissenschaft.  
 Johns Hopkins Hospital. Bulletin.  
 Johns Hopkins University. Studies.  
 Journal de Botanique.  
 Journal de Physique.  
 Journal fur Praktische Chemie.  
 Journal of Comparative  
 Neurology.  
 Journal of Education. (London.)  
 Journal of Educational Psy-  
 chology.  
 Journal of Electricity, Power and  
 Gas.  
 Journal of Experimental  
 Medicine.  
 Journal of Experimental  
 Zoology.  
 Journal of Geography.  
 Journal of Geology.  
 \*Journal of Industrial and Engi-  
 neering Chemistry.  
 Journal of Infectious Diseases.  
 Journal of Medical Research.  
 Journal of Nervous and Mental  
 Diseases.  
 Journal of Philology.  
 Journal of Philosophy, Psychol-  
 ogy, and Scientific Methods.  
 (N. Y.)  
 Journal of Physical Chemistry.  
 Journal of Physiology.  
 Journal of Political Economy.  
 \*Journal of Zoophily.  
 Klio.  
 Kuntschronik.  
 Lancet.  
 Library Journal.  
 Library Work.  
 Literary Digest.  
 \*Lowell Observatory. Bulletin.  
 \*McClure's Magazine.  
 Mathematical Gazette.  
 Medical Record.  
 \*Memphis Medical Monthly.  
 Mercure de France.  
 Messenger of Mathematics.  
 Metallurgical and Chemical  
 Engineering.  
 \*Michigan Alumnus.  
 \*Michigan Law Review.  
 Mind.  
 Mineralogical Magazine. (Lond.)  
 Mines and Minerals. (Scranton.)  
 Mining and Scientific Press.  
 \*Mining Investor.  
 \*Mining Science.  
 Mining World.  
 Mitteilungen d. Kais. Deut.  
 Archæolog. Instituts. Athenische  
 Abteil.  
 Same Romische Abteil.  
 Modern Language Association of  
 America. Publications.  
 Modern Language Notes.  
 Modern Philology.  
 Monist.  
 \*Motor Field.  
 Muenchner Medicinische Wochen-  
 schrift.  
 Municipal Engineering.  
 \*Municipal Facts.  
 Musical Courier.  
 Musical Times. (Lond.)  
 Musician.  
 Nation.  
 National Geographic Magazine.  
 (Wash.)  
 Nature.  
 New England Water Works  
 Assoc. Journal.  
 New Music Review.  
 \*New Philosophy.  
 New York Entomological Society.  
 Journal.  
 New York Medical Journal.  
 Nineteenth Century.  
 North American Review.  
 \*North German Lloyd Bulletin.  
 Nuova Antologia.  
 \*Ohio Naturalist.  
 Open Court.  
 \*Our Dumb Animals.  
 \*Out Door Life.  
 Outlook.  
 \*Pacific Miner.  
 Pädagogisches Archiv.  
 Pedagogical Seminary.  
 Phil. Engineering Club.  
 Proceedings.



- Philosophical Magazine.  
 Philosophical Review.  
 \*Physical Review.  
 Physikalische Zeitschrift.  
 Plant World.  
 Poet Lore.  
 Political Science Quarterly.  
 Popular Science Monthly.  
 Power.  
 \*Providence Medical Journal.  
 Psyche.  
 Psychological Clinic.  
 Psychological Index.  
 Psychological Review. Bulletin.  
 Psychological Review. Monographs and Supplements.  
 Psychologische Studien.  
 \*Public.  
 Public Health Journal.  
 Publisher's Weekly.  
 Quarterly Journal of Economics.  
 Quarterly Journal of Microscopical Science.  
 Quarterly Journal of Pure and Applied Mathematics.  
 Quarterly Review.  
 Railroad Age Gazette.  
 Railway and Engineering Review.  
 Railway and Locomotive Engineering.  
 Readers' Guide to Periodical Literature.  
 Review of Neurology.  
 (Edinburgh.)  
 \*Review of Religions.  
 Revue Archeologique.  
 Revue d'Histoire Ecclesiastique.  
 Revue d'Histoire Moderne et Contemporaine.  
 Revue de Mecanique.  
 Revue de Medicine. (Paris.)  
 Revue de Philologie, de Literatur, et Histoire Ancienne. (Paris.)  
 Revue des Deux Mondes.  
 Revue des Questions Historiques.  
 Revue General de Botanique.  
 Revue Historique.  
 Rheinische Museum. für Philologie.  
 \*Rocky Mountain Educator.  
 Romania.  
 Royal Microscopical Society. Journal.  
 Royal Society Proceedings. (Sec. A. Physics.)  
 Royal Society of Medicine. Proceedings.  
 Schmidt's Jahrbuch der Medicin.  
 School Review.  
 School Science and Mathematics. Science.  
 Science Abstracts. A. Physics.  
 Science Abstracts. B. Electrical Engineering.  
 Scientific American.  
 Scientific American. Supplement.  
 Scottish Geographical Magazine.  
 Scribner's Magazine.  
 Semaine Medicale. (Paris.)  
 Signale.  
 \*Silver and Gold. (Univ. of Colo.)  
 \*Sister Republics.  
 Society of Chemical Industry. Journal.  
 Spectator. (London.)  
 \*Square and Compass.  
 State Publications. Library of Congress. (Monthly.)  
 \*Sunset.  
 Survey.  
 Surveyor. (Lond.)  
 Tablet.  
 Teachers' College Record.  
 \*Technology Review.  
 \*Theosophical Quarterly.  
 Therapeutic Gazette.  
 Torrey Botanical Club. Bulletin.  
 Torrey. Torrey Botanical Club.  
 \*Tropical Agriculturist.  
 Uber Land und Meer.  
 Velhagen und Klasing's Monatshefte.  
 Vierteljahrsschrift für Wissenschaftliche Philosophie u. Zoologie. (Lpz.)  
 \*Western Chemist and Metallurgist.  
 Western Journal of Education.  
 Western Society of Engineers. Journal.  
 Western World.  
 Westminster Review.  
 Wiener Klinische Wochenschrift. (Vienna.)  
 Wochenschrift für Klassische Philologie.  
 \*Woodcraft.  
 World's Work.  
 \*Yale Bulletin.  
 Yale Review.  
 Zeitschrift d. Praktische Geologie. (Berlin.)  
 Zeitschrift d. Vereines Deutsche Ingenieure.  
 Zeitschrift für Analytische Chemie.  
 Zeitschrift für Angewandte Chemie.  
 Zeitschrift für Anorganische Chemie.  
 Zeitschrift für Bildende Kunst.  
 Zeitschrift für Elektrochemie.  
 Zeitschrift für Mathematik u. Physik.  
 Zeitschrift für Philosophie u. Philosophische Kritik.  
 Zeitschrift für Physikalische Chemie.  
 Zeitschrift für Psychologie u. Physiologie des Sinnesorgane.  
 Zeitschrift für Romanische Philologie.



Zeitschrift für Tuberculose.  
 Zeitschrift für Vergleichende  
 Literatur Geschichte.  
 Zeitschrift für Vergleichende  
 Sprachforschung.

Zeitschrift für Wissenschaftliche  
 Insektenbiologie.  
 Zentralblatt für die Gesamte  
 Physiologie.  
 Zoologischer Anzeiger.  
 Zoologisches Zentralblatt.

\* Gift.

### ANNUALS, CONTINUATIONS, AND OCCASIONAL PUBLICATIONS, 1911.

American Art Annual.  
 American Association for the Advancement of Science. Proceedings.  
 American Catalogue.  
 American Economic Association. Publications.  
 American Year Book.  
 Annual American Catalogue.  
 Annual English Catalogue.  
 Annual Library Index.  
 Arnolt-Muss Concise Dictionary of the Assyrian Language.  
 Bibliographie der Deutschen Zeitschriften Literature.  
 \*Boston Public Library. Annual list of new books.  
 Bulletino della Commissione Archæologica, Comunale di Roma.  
 Cambridge History of English Literature.  
 Chwolson-Traite de Physique.  
 Concilium Bibliographicum.  
 Deutscher Bühnen Spielplan.  
 Encyclopædie der Mathematischen Wissenschaften.  
 Engler and Prantl. Natürlichen Pflanzenfamilien.  
 Engler and Prantl. Natürlichen Pflanzenfamilien.  
 Evans. American Bibliography.  
 Goursat. Cours d'Analyse Mathématique.  
 Grout. Mosses.  
 Harvey Society. Lectures.  
 Hazell's Annual.  
 Holway. North American Aredineæ.  
 International Catalogue of Scientific Literature—Botany.  
 Jahresbericht u. d. Erscheinung auf dem Gebiete der; Germanischen  
 Philologie.  
 Journals of the Continental Congress.  
 Jordell. Catalogue Mensuel.  
 Knachfuss. Künstler Monographien.  
 Kræpelin, Emil. Psychologische Arbeiten.  
 Lavissee. Histoire de France.  
 Levy. Étude sur la Détermination des Feldspaths.  
 London Mathematical Society. Proceedings.  
 McMaster. History of the United States.  
 Mathematical Questions (from Educational Times.)  
 Merck's Archives.  
 Mineral Industry.  
 Minerva. Handbuch.  
 Minerva. Jahrbuch.  
 Mississippi Valley Historical Association. Proceedings.  
 Municipal Yearbook of Great Britain.  
 Murray. New English Dictionary.  
 National Municipal League. Proceedings.  
 Nebraska Bibliographical Contributions.  
 North American Flora.  
 Osler and McCrae. Modern Medicine.  
 Pauly. Real-encyclopædie classischen Altertumswissenschaft.  
 Qui Êtes-Vous?  
 \*Railroad Red Book (D. & R. G.)  
 Readers' Guide to Periodical Literature.  
 Reference Catalogue of Current Literature.  
 Répertoire Bibliographique Française.  
 Rouse. Year's Work in Classical Studies.  
 Ruggiero. Dizionario Epigraphico di Antichità Romane.

Sammlung von Abhandlungen aus dem gebiete der Pädagogischen  
Psychologie und Physiologie.

Sargent. Trees and Shrubs.

Sars. Crustacea of Norway.

Sinzheimer. Technisch-Volkswirtschaftliche Monographien.

\*Smithsonian Institution:

Annual Report.

Bulletin.

Contributions to Knowledge.

Miscellaneous Collections.

Proceedings.

Society for the Promotion of Hellenic Studies. Journal.

Statesman's Year Book.

Statistisches Jahrbuch des Deutschen Reichs.

Studien zur Englischen Philologie.

Thesaurus Linguae Latinae.

Tradelist Annual.

\*Union Club (N. Y.) Annual.

United States Catalogue.

\*United States Publications:

(Note.—The Library is a designated depository for government publications and receives a copy of each document of a public nature.) Continuations include:

Agriculture Department.

Bulletins of various divisions.

Crop Reporter.

Experiment Station Record.

Farmers' Bulletin.

Library Bulletin.

List of Publications. (Monthly.)

Weather Review. (Monthly.)

Weather Map. (Daily.)

Commerce and Labor Department.

Census Bureau. Bulletin.

Labor Bureau. Bulletins.

Manufactures Bureau. Daily Consular and Trade Reports.

Special Consular Reports.

Standards Bureau. Bulletin.

Statistics Bureau. Summary of Commerce and Finance.  
(Monthly.)

Congressional Documents.

Congressional Record. (Daily during sessions.)

Government Printing Office. Superintendent of Public Documents.

Catalogue of Public Documents. (Monthly.)

Interior Department.

Education Bureau. Bulletin.

Geological Survey. Bulletin.

Geologic Atlas.

Mineral Resources.

Monographs.

Professional Papers.

Topographical Maps.

Water Supply Papers.

Library of Congress. Catalogue of Copyright Entries.

Navy Department. Navy Medical Bulletin.

Pan-American Union. Bulletin.

Patent Office. Official Gazette.

Treasury Department.

Public Health and Marine Hospital Service.

Public Health Reports. (Weekly.)

\*University Club (Denver) Annual.

\*University Club (N. Y.) Officers, etc.

\*University Club (Phil.) Officers.

Wer ist's?

Who's Who.

Who's Who in America.

World's Almanac.

SCIENTIFIC AND LITERARY PUBLICATIONS RECEIVED BY EXCHANGE  
AND GIFT.

Alabama Geological Survey.  
 American Historical Association. Annual Reports.  
 American Jewish Historical Society. Publications.  
 American Museum. Journal.  
 American Philosophical Society. Proceedings.  
 Annales du Midi (Toulouse).  
 Annals of Iowa. Historical Quarterly.  
 Archæological Institute of America. Bulletin.  
 Argentina. Sociedad Científica. Annales.  
 Arkansas Geological Survey.  
 Australian Museum Records.  
 Basel Universität. Programme.  
 Baylor University. Bulletin.  
 Belfast Natural History and Philosophical Society. Proceedings.  
 Boston Society of Natural History. Proceedings.  
 Bristol Naturalists' Society. Proceedings.  
 Brooklyn Institute of Arts and Sciences. Bulletin. Memoirs.  
 Brooklyn Institute of Arts and Sciences. Museum. Science Bulletins.  
 Bryn Mawr College. Monographs.  
 Buenos Ayres. Museo Nacional. Anales.  
 Buffalo Historical Society. Publications.  
 Buffalo Society of Natural Sciences. Bulletin.  
 Bulletin Populaire de la Pisciculture. (Toulouse.)  
 California Academy of Sciences.  
 Cambridge Philosophical Society. Proceedings.  
 Canadian Institute. Transactions.  
 Canada. Dept. of Mines. Geological Survey Branch. Annual Report.  
 Canada. Dept. of Mines. Geological Survey Branch. Bulletins.  
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 Canada. Dept. of Mines. Mines Branch. Bulletin.  
 Carnegie Foundation for Advancement of Teaching. Bulletins.  
 Carnegie Institution of Washington. Annual Reports.  
 Carnegie Institution of Washington. Publications.  
 Carnegie Institution of Washington. Year Book.  
 Chicago Academy of Sciences. Bulletin.  
 Chicago Historical Society. Annual Report.  
 Clark University Library. Publications.  
 Clarkson Memorial School of Technology. Bulletin.  
 Clemson Agri. College. Extension Work.  
 Cold Spring Harbor. Monographs.  
 Colorado College. Studies.  
 Colorado Scientific Society. Papers.  
 Colorado State School of Mines. Technical and Engineering Society.  
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 Columbia University. Contributions to Philosophy, Psychology and Education.  
 Connecticut Academy of Arts and Sciences. Transactions.  
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 Connecticut State Geological and Natural History Society. Bulletin.  
 Davenport Academy of Natural Science. Proceedings.  
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 George Washington University. Bulletin.  
 Georgia Geological Survey.  
 Glasgow Naturalist.  
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 Habana. Bibliotheca Nacional. Revista.  
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- Illinois Natural History Society. Transactions.  
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 Madrid. Sociedad Espanola de Historia Natural. Boletin.  
 Madrid. Sociedad Espanola de Historia Natural. Memorias.  
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 Maryland Geological Survey.  
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 Michigan Geological Survey.  
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 Montana. State Entomologist. Annual Reports.  
 Montevideo. Collegio pio de Villa Colon. Observatory. Ano Meteorologico.  
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 Naples. Academia delle Scienze Fisiche e Matematiche. Rendiconto.  
 Napoli Regia Universita degli Studj de Annuario.  
 National Academy of Sciences (Wash.). Memoirs.  
 National Conference of Charities and Corrections. Bulletin.  
 Nebraska Geological Survey.  
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 New South Wales. Geological Survey. Mines and Agriculture. Records.  
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 New York State Museum. Annual Reports.  
 New York State Museum. Bulletins.  
 New York State Museum. Memoirs.  
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 Ohio Geological Survey.  
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 Oporto (Portugal). Academia Polytechnique de Porto. Obras Sobre Mathematica.  
 Oregon Historical Society. Quarterly.  
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 Palermo. Rendiconti del Circolo Matematico di Palermo.  
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 Peradeniya (India). Royal Botanic Gardens. Annals.

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     Tidskrift.  
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     Science.  
 Toluca (Mexico). Instituto Cientifico y Literario "Porfiro Diaz."  
     Boletin.  
 Tufts College. Studies. Scientific Series.  
 Turin (Italy). Reale-Accademia della Scienze di Torino. Atti.  
 Turin (Italy). Reale Osservatorio Astronomo. Annual.  
 Union University. Quarterly.  
 Universidad de Buenos Ayres. Revista.  
 Universidad de Chili. Annales.  
 Universidad de la Habana. Revista de la Facultad de Letras y  
     Ciencias.  
 Université de Toulouse. Bulletin.  
 University of California. Publications. Botany.  
 University of California. Publications. Classical Philology.  
 University of California. Publications. Economics.  
 University of California. Publications. Education.  
 University of California. Publications. Geology.  
 University of California. Publications. University Chronicle.  
 University of California. Publications. Zoology.  
 University of Chicago. Theses.  
 University of Cincinnati. Bulletin.  
 University of Durham. Philosophical Society. Proceedings.  
 University of Illinois. Bulletin.  
 University of Illinois. Studies.  
 University of Kansas. Bulletin.  
 University of Missouri. Studies. Laws Observatory.  
 University of Missouri. Studies. Social Science Series.  
 University of Montana. Bulletin. Biological Series.  
 University of Montana. Bulletin. Geological Series.  
 University of Nebraska. Bulletin.  
 University of Nebraska. Studies.  
 University of Nebraska. Studies of Zoology Laboratory.  
 University of Nevada. Studies.  
 University of the State of N. Y. Publications.  
 University of North Carolina. Bulletin.  
 University of Ohio. Bulletin.  
 University of Oklahoma. Research Bulletin.  
 University of Oregon. Bulletin.  
 University of Pennsylvania. Contributions.  
 University of Pennsylvania. University Bulletin.  
 University of Tennessee. Record.  
 University of Texas. General Series. Bulletin.  
 University of Texas. Humanistic Series.  
 University of Texas. Medical Series.



University of Texas. Mineral Survey. Bulletin.  
 University of Texas. Record.  
 University of Texas. Science Series.  
 University of Toronto. Studies. Biology.  
 University of Toronto. Studies. Chemistry.  
 University of Toronto. Studies. Geology.  
 University of Toronto. Studies. History.  
 University of Toronto. Studies. Philology.  
 University of Toronto. Studies. Physical Science.  
 University of Toronto. Studies. Psychology.  
 University of Vermont. Contributions.  
 University of Wisconsin. Bulletin.  
 University of Wisconsin. Economics and Political Science Series.  
 Bulletin.  
 University of Wisconsin. Engineering Series. Bulletin.  
 University of Wisconsin. History. Bulletin.  
 University of Wisconsin. Philology and Literature Series. Bulletin.  
 University of Wisconsin. Science Series. Bulletin.  
 Upsala. Entomologisk Tidskrift.  
 Vanderbilt University. Quarterly.  
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 de l'observatoire de Varsovie.  
 Washington Academy of Sciences.  
 Washington University. Bulletin.  
 Washington University. Theses.  
 Wesleyan University. Bulletin.  
 Western Reserve University. Bulletin.  
 Whitman College Quarterly.  
 Wilson Ornithological Club. Bulletin.  
 Wisconsin Academy of Sciences, Arts and Letters. Transactions.  
 Wisconsin Natural History Society. Bulletin.  
 Yale University. Astronomical Observatory. Publications.  
 Zurich (Switzerland). Naturforschenden Gesellschaft.  
 Vierteljahrsschrift.

LIBRARIES FROM WHICH BULLETINS AND PUBLICATIONS ARE REGULARLY  
RECEIVED AS GIFTS.

Boston Public Library.  
 Bowdoin College Library.  
 Brooklyn Public Library.  
 California State Library.  
 Clark University Library.  
 Delaware State Library Commission.  
 Denver Public Library.  
 Detroit Public Library.  
 Hartford Public Library.  
 Helena Public Library.  
 Idaho Free Library Commission.  
 Indiana Public Library Commission.  
 Iowa Grand Lodge of Masons Library.  
 Iowa Library Commission.  
 Kansas Traveling Library Commission.  
 Los Angeles Public Library.  
 Maryland State Library Commission.  
 Massachusetts Free Library Commission.  
 Milwaukee Public Library.  
 Minnesota State Library Commission.  
 Nebraska Public Library Commission.  
 New Hampshire Public Library Commission.  
 New Jersey Public Library Commission.  
 New York Mercantile Library.  
 New York Public Library.  
 New York University Club Library.  
 Newark Free Library.



Oberlin College Library.  
 Ohio State Board of Library Commissioners.  
 Omaha Public Library.  
 Osterhout Free Library.  
 Pennsylvania Free Library Commission.  
 Philadelphia Free Library.  
 Pittsburg Carnegie Library.  
 Portland (Oregon) Public Library.  
 Pratt Institute Library.  
 Providence Libraries.  
 St. Louis Public Library.  
 Salem (Wash.) Public Library.  
 San Francisco Free Library.  
 Scranton Public Library.  
 Springfield (Mass.) City Library.  
 Texas State Library.  
 Vermont Library Commission.  
 Wisconsin Free Library Commission.  
 Worcester Free Public Library.

NEWSPAPERS DONATED BY THE PUBLISHERS AND SOME OTHERS ON FILE  
 IN THE READING ROOM.

Eastern.

\*Boston Transcript. (Daily.)  
 \*Chicago Tribune. (Daily.)  
 Christian Science Monitor.  
 \*London Times. (Weekly.)  
 \*N. Y. Tribune. (Daily.)  
 \*Washington Post. (Daily.)

Colorado.

Alamosa. Courier.  
 Alamosa. Independent Journal.  
 Boulder. Camera. (Daily.)  
 Boulder. Herald. (Daily.)  
 Boulder. News. (Weekly.)  
 Boulder County Miner. (Weekly.)  
 Breckenridge Bulletin.  
 Breckenridge. Summit County  
 Journal.  
 Canon City Record.  
 Carbondale Item.  
 Central City. Gilpin Observer.  
 Central City. Weekly Register-  
 Call.  
 Clay's Review. (Weekly.)  
 Colorado Graphic.  
 Colorado Springs. Evening Tele-  
 graph. (Daily.)  
 Delta County Tribune. (Weekly.)  
 Denver. Catholic Register.  
 (Weekly.)  
 Denver. Daily Mining Record.  
 \*Denver Post. (Daily.)  
 \*Denver Republican. (Daily.)  
 Denver. Republican. (Daily) for  
 Binding.  
 \*Denver. Rocky Mountain News.  
 (Daily.)  
 \*Denver. Times. (Daily.)  
 Durango Democrat. (Daily.)

Erie Herald.  
 Fort Morgan. Morgan County  
 Herald.  
 Fort Morgan Times.  
 Fowler Tribune.  
 Georgetown Courier. (Weekly.)  
 Glenwood Post.  
 Golden Globe. (Weekly.)  
 Golden. Colorado Transcript.  
 (Weekly.)  
 Grand Junction Daily News.  
 Grand Junction Herald.  
 Greeley Tribune.  
 Gunnison News-Champion.  
 Highland Chief.  
 Idaho Springs Mining Gazette.  
 (Weekly.)  
 Lake City Phonograph.  
 Lake City Times.  
 Lamar Sparks.  
 Leadville Herald-Democrat.  
 (Daily.)  
 Longmont Ledger.  
 Loveland. Register.  
 Loveland. Reporter.  
 Meeker Herald. (Weekly.)  
 Montrose Press. (Weekly.)  
 Pueblo Chieftain.  
 Pueblo Star-Journal.  
 Pueblo Sunday Opinion.  
 Saguache Crescent.  
 Salida. Mail.  
 Salida. Record.  
 Sterling Democrat.  
 Sterling. Republican Advocate.  
 Svenska Amerikanska. Weekly.  
 Denver.  
 Trinidad. Chronicle-News.  
 (Daily.)  
 Walden. New Era.  
 Weld County Republican.

## THE UNIVERSITY PUBLICATIONS

1. Catalogue, published in March, containing general information about the University and its separate departments.
2. Summer School Catalogue.
3. The special Announcements of the Departments of Medicine, Law, Engineering, Education, and of the Graduate School, published in June.
4. The biennial report of the Regents of the University, recording the progress of the Institution during the previous biennial period, and showing the University budget of receipts and expenditures for the same period. Published biennially in October.
5. The University of Colorado Studies, published at irregular intervals, and containing original contributions by members of the University Faculties.
6. The Investigations of the Departments of Psychology and Education, published from time to time.
7. Medical Bulletin, published by the Medical Department.
8. The Booklet of Views, containing half-tone cuts of the buildings and grounds.
9. The University News-Letter, published at intervals of three months, and containing current news of the University.
10. General Catalogue of the Officers, Members of the Faculties, and Graduates of the University from the opening of the Institution, published triennially.
11. The Commencement Addresses, containing the Baccalaureate Address and the Commencement Oration, published in June.

These publications may be obtained by application to the Secretary of the University.

## STUDENT PUBLICATIONS

A weekly paper, which is named after the University colors, *The Silver and Gold*, and a monthly literary magazine called *The Colorado Magazine*, are published by the students.

*The Coloradoan*, an annual, is published by each Junior Class.

*The Journal of Engineering* is published annually by the students of the College of Engineering.

*The University of Colorado Hand-Book* is published annually by the Christian Associations.

*The Civic Quarterly* is published by the Civic Society.

## THE UNIVERSITY SCIENTIFIC SOCIETY

The University Scientific Society was founded in 1888, for the purpose of affording a common meeting ground for all those interested in scientific subjects—students and townspeople, as well as the members of the University faculty. The growth of the more specialized scientific societies rendering necessary a reorganization in 1907, the constitution was changed to meet the need felt for a society in which topics of a wider university interest could be discussed. Regular meetings of the Society are held every Monday evening at eight o'clock. The papers read before these meetings are intended to set before the members some of the results of modern investigation in literature, language, and history, as well as in more strictly scientific work in the natural sciences.

## HONOR SOCIETIES

Three honor societies, to which students of high scholastic standing are eligible, have chapters at the University of Colorado. Phi Beta Kappa elects to membership senior students in the College of Liberal Arts. Sigma Xi offers membership to graduate and undergraduate students who have shown special ability in scientific investigations. Tau Beta Pi is a technical society, selecting members from students in the College of Engineering.

## STUDENT LITERARY SOCIETIES AND CLUBS

Literary societies and debating clubs are organized and conducted each year by the students.

The Richard's Literary Society comprises in its limited membership both men and women, and aims to promote all dramatic, oratorical, and literary activities. It maintains yearly a series of inter-school debates and open meetings, and takes part in the celebration of national holidays.

The Scribblers' Club aims to develop talent in original literary work. Meetings are held every two weeks, the programmes consisting entirely of poems, essays, sketches, or stories written by the members. Membership is open to both men and women.

The University of Colorado Debating Society was organized for the purpose "of cultivating a correct mode of speaking and qualifying its members by practice to express their opinions in public in a correct manner." The Society spends most of its time in senate and par-

liamentary practice. Membership is open to men of the University who are interested in debating and oratory.

The Engineers' Literary Society offers to students in the College of Engineering the same opportunities for development along literary lines which the Richard's Literary Society gives to college students. Weekly meetings are held during the academic year.

The Journal Club is an organization of those students, especially of the departments of education and psychology, interested in current educational literature and events and contemporary educators, articles, books, educational news and experiments. This club meets each week.

The Civic Club, composed of students in the Department of Economics and Sociology, has regular meetings for the discussion of subjects of interest in that department. The Civic Quarterly is published by the Club.

The Historical Society is composed of students in the Department of History. Its meetings are devoted to a study of contemporary history.

The University Dramatic Club is organized for the purpose of promoting dramatic study. Rehearsals are held regularly under the supervision of the Instructor in Oratory, and one or more public presentations are given during the year.

The University of Colorado Graduate Club is organized for literary and scientific discussions.

The Civil Engineers' Society, the Electrical Engineers' Society—a student branch of the American Institute of Electrical Engineers, and the Mechanical-Chemical Society have been organized by the students in the College of Engineering. These societies meet every two weeks. In each original papers on questions of technical interest are presented and discussed. These three societies joined as "The Associated Engineering Societies" publish the Journal of Engineering.

## MUSICAL ORGANIZATIONS

The University double quartet makes an annual tour of the state during the spring vacation.

The University instrumental quintet makes the annual tour in connection with the double quartet.

The University band of twenty-five members furnishes music for the various general University functions, also giving a concert in the Spring in connection with the other musical organizations.

All musical organizations are under the direction or general supervision of the Professor of Music, members being selected by competitive examinations.

### CHRISTIAN ASSOCIATIONS

The Young Men's Christian Association and the Young Women's Christian Association have organizations in the University, which are open to members of the faculties and students of all departments.

Regular weekly religious services and also classes for the study of the Bible are held separately by each Association.

Vesper services are held in the Chapel under the auspices of these organizations.

Resident Secretaries are employed by the Associations, and their services are at the disposal of prospective students and their friends. A copy of the Students' Handbook, which is issued by the Associations, and is descriptive of life at the University, is furnished upon request.

The Y. W. C. A. conducts a Board and Room Register, a Book Exchange, and a Self-Help Bureau for the convenience of women students at the opening of each school year. The Y. W. C. A. offices are in the Woman's Building, and are open at all times to the women of the University.

The Y. M. C. A. has offices in the Main Building. A permanent employment bureau is conducted.

Church attendance is optional, but students are advised to attend some one of the numerous churches in town. The churches in Boulder are Baptist, Catholic, Christian, Christian Science, Congregational, Episcopal, Lutheran, Methodist, Presbyterian, Seventh Day Adventist, Seventh Day Baptist, Swedish Baptist and Swedish Lutheran.

### CHAPEL EXERCISES

The period from 11:00 to 11:30 is set apart for daily assembly of students. During this period no class or lecture work is conducted.

On Monday, Tuesday, Wednesday, and Thursday, the attendance is required for the first, second, third, and fourth chapel divisions, respectively, and a brief address is given by a member of the Faculty or by some speaker invited for the occasion. The attendance on other days is voluntary. On Friday, after Scripture reading and a hymn, time is allowed for various student meetings.



### STUDENT PASTOR

In the fall of 1909 the Synod of the Presbyterian Church of Colorado appointed Rev. J. Wilson Currens, M. A., to represent that denomination in the University. He is a pastor not only to the students of his own denomination, but also to those of other denominations.

### HIGH-SCHOOL DAY

The observance of High-School Day has been made one of the regular features of the academic year. The purpose of this day is to afford to the senior students of the High Schools an opportunity of visiting the State University, inspecting its buildings and grounds and so far as possible learning the scope and spirit of its life and work. The railroads make special rates for High-School Day, and thus place a visit to the University within the reach of most of the High-School students of the State.

### ALUMNI ASSOCIATION

The University of Colorado Alumni Association was organized in 1882. Its purposes are to aid in promoting the interests of the University of Colorado, and to cultivate sociability and good fellowship among its members. The annual meeting and annual dinner of the Association occur at the University during Commencement Week. Local alumni associations have been formed in the principal cities and towns in Colorado. Among those now in existence are the following: The Cripple Creek District Alumni Association, The Denver Alumni Association, The Durango Alumni Association, The Telluride Alumni Association, The Leadville Alumni Association, The Boulder Alumni Association, The Pueblo Alumni Association, The Greeley Alumni Association, and The Idaho Springs Alumni Association. There are also alumni associations in Pittsburg, Pa., Chicago, Ill., and Seattle, Wash.

Officers of the General Alumni Association are elected at the annual meeting. The present officers are: Harry A. Curtis, 1908, 1910, President; Philip S. Van Cise, 1907, 1909, Vice-President; Mrs. Gertrude F. Currens, 1900, 1908, Secretary-Treasurer; Herman Weinberger, 1908, 1910, and Jessie Fitzpatrick, 1908, Executive Committee.

### THE ASSOCIATED STUDENTS

The student body is organized into an association known as "The Associated Students of the University of Colorado." Through this



Association the students act collectively in all their University relations. There are three executive boards—the Commission, the Athletic Board and the Debating Board. The Commission controls general interests and the other two boards the activities indicated by the names; together they appoint the general manager who has direct control of, and responsibility for, every student enterprise of general interest. By the payment of a \$5.00 fee any student, alumnus, or member of the faculties is entitled to admission to all local contests, games or other events under the Association's auspices. Provision is made in the Constitution for a careful supervision of student funds, for the recall of any officers and for the initiative and referendum.

The officers for the present year are: President, Herbert F. Bonnell; Vice-President, George Matthews; Secretary, Pearl B. Rucker; General Manager, Herman Weinberger, B.A., LL.B.; Yellmaster, Ralph L. Carr, B.A. The members of the Commission are the president, the vice-president, the secretary and the yellmaster of the Associated Students, and Professor John B. Ekeley, Orange M. McNeil, Oliver C. Wilson, B.A., John S. Barrows and Carl T. Lichty, B.A. The members of the Athletic Board are Professor George Norlin, Professor Oliver C. Lester, Professor John A. Hunter, the president of the Associated Students, Orange M. McNeil and George Matthews. The members of the Debating Board are Professor John S. McLucas, Professor William H. Pease, Acting Professor S. Griswold Morley, the president of the Associated Students, John S. Barrows and Carl T. Lichty.

### ORATORICAL AND DEBATING INTERESTS

Public debates and oratorical contests are held under the management of the Debating Board of the Associated Students. This Board has power to regulate debating and oratorical contests in all of their forms—intercollegiate, inter-school, and inter-class.

The Debating Board conducts each year prize contests. Cash prizes are given.

In 1895, Hon. Sidney A. Giffin tendered an annual prize for excellence in public debate in the College of Liberal Arts. The offer was accepted by the Regents of the University. Since the death of Mr. Giffin in 1910 the prize has been offered by his son, Mr. James A. Giffin, in memory of his father. Each college class is represented by two members, one being appointed by the class and one by the Committee of the Faculty. The subject is chosen by the donor of

the prize. There are three judges appointed, one by the donor, one by the President of the University, and one by the debaters. During preparation a short brief may be committed to writing, but no part of the argument. Contestants speak but once; they may occupy twelve minutes each. The prize is awarded for the best individual argument.

The University holds annual debates with other state universities. The debating teams consist of the honor men of the debating class, which is under the direct supervision of the debating coach. Any person in the University may enter the class, provided he has registered before October 1.

The Board arranges programmes for the observance of national holidays that fall within the academic year.

### THE BENNETT PRIZE

The Bennett prize is awarded annually at Commencement for the best essay on *The Principles of Free Government*. Any student in the University may compete. The prize awarded is the income of the sum of \$400 presented to the Regents of the University by Hon. William J. Bryan, Trustee for Philo Sherman Bennett.

### PHYSICAL TRAINING AND ATHLETICS

Systematic training in physical culture is given in formal gymnasium classes, and in the main branches of in-door and out-door sports. All these are under the competent supervision of the Director of Athletics, with the aid of two assistants in the gymnasium and a graduate medical attendant for women. During the football season a coach and an assistant coach are employed for this sport.

For the most part the athletic training is on a voluntary basis, but a formal course in physical culture is required of the freshman class in the College of Liberal Arts.

The climate is such as to make out-of-door recreation and games agreeable during most of the year. Adequate training and coaching are given to football, baseball, track athletics, cross-country running, basketball; and this spring special attention is to be given to tennis.

It is the purpose of the University to stimulate interest in the greatest possible variety of wholesome games and sports. The policy of developing highly specialized inter-collegiate teams is subordinated to that of providing suitable forms of corrective and upbuilding exercise for all members of the student body.

The present athletic field, being inadequate for our purposes, the University has recently acquired twelve acres north and east of the campus, and just across Boulder Creek. To this field—to be known as Stratton Field—additions may be made by later purchase. This new playground has the advantage of being not far from the center of the campus; it is beautifully situated along the shady river bank, and will be large enough to give ample room for all the various College sports.

Athletics—especially inter-collegiate athletics—are placed on a stable financial foundation under the organization of the Associated Students of the University. A fee of \$5.00, for the support of all student interests and activities, which the students imposed upon themselves by an almost unanimous vote, is now sanctioned by the Regents, and is collected from each student at the beginning of the year.

General supervision and direction of athletics is vested in the Athletic Board, composed of three members of the Faculty, appointed by the President of the University, and three student members, who are officials of the Associated Students. This Board is responsible in all things to the University Senate.

### DEAN OF WOMEN

The Dean of Women devotes most of her time to the interests of the women students of the University. Miss S. Antoinette Bigelow, formerly of Wellesley, was appointed Dean of Women in September, 1910.

### WOMAN'S LEAGUE

The Woman's League, a voluntary association composed of the women students of the University, was established in 1895. It has a two-fold purpose: first, to promote the social and intellectual welfare of the women of the University; and, secondly, to establish a loan fund for the benefit of the women students. This fund is at present about one thousand dollars.

The Board of Control of the League consists of an Executive Committee, made up of the following officers: President, First and Second Vice-Presidents, Corresponding Secretary, Recording Secretary, Treasurer, and Chairman of the Entertainment Committee. These officers are elected in the last month of the school year. Each officer appoints a committee to help her, and these committees wel-

come the women students who are new-comers to the University, and extend to them a helping hand whenever needed. There is also an Advisory Board, chosen from the wives of members of the Faculty, who meet with the Board of Control every month, and assist them in planning the entertainments and other work of the League.

The Woman's Building furnishes headquarters for the women of the University. Here are the offices of the Dean of Women, the Woman's League, and the Young Women's Christian Association. There is a hall for meetings and entertainments.

### ENTRANCE

Students on arrival at the University may obtain information concerning rooms and board at the Secretary's office in the Main Building. Usually the trains are met by representatives of the Christian Associations. The Y. W. C. A. and Woman's League rooms in the Woman's Building are open for the reception of women students during the opening days of the University.

The office is open for registration, beginning Friday morning preceding the opening day of the University. All students are requested to register as soon as possible after their arrival.

### REQUIREMENTS FOR ADMISSION

Candidates for admission are expected to be graduates of a standard four-year high or preparatory school, or to have completed a corresponding amount of work under other conditions. Matriculants in the School of Medicine and, beginning in 1912, in the School of Law must also present two years of college work. (See below.)

Students may be admitted on the passing of satisfactory examinations or on the presentation of satisfactory certificates from an accredited high school.

Applications from graduates of a non-accredited school will be considered as the merits of each case may warrant; but full standing in such instances shall be conditional upon the subsequent work of the student concerned.

Candidates twenty-one years of age, who cannot satisfy the admission requirements, but are qualified to pursue special work, may be admitted to certain courses on the approval of the proper committee of the faculty.

Certificates of moral character may be required from all applicants for admission.

Fifteen units are required for admission. Entrance conditions will not be allowed beyond the equivalent of two units. A unit course of study is defined as a course covering a school year of not less than thirty-six weeks, with five periods of at least forty-five minutes each per week, two periods of Manual Training or Laboratory work being equivalent to one period of classroom work. This is equivalent to one hundred and eighty actual "periods" per unit. The fifteen units are equivalent to thirty "points."

ADMISSION TO THE COLLEGE OF LIBERAL ARTS, COLLEGE OF COMMERCE  
AND COLLEGE OF EDUCATION.

The candidate for admission should present fifteen units as follows:

|                              |       |
|------------------------------|-------|
| Mathematics                  | 2     |
| Languages other than English | 4     |
| English                      | 3     |
| History                      | 2     |
| Science                      | 2     |
| Electives                    | 2     |
|                              | <hr/> |
|                              | 15    |

Electives may be chosen from the following: Mathematics, 2; Greek, 2; Latin, 2; French, 2; German, 2; Spanish, 2; History, 2; English, 1; Science, 2; Psychology,  $\frac{1}{2}$ . From the following group, subject to special accrediting by the University, not more than three units: Drawing, 1; Manual Arts, 2; Domestic Science, 1; Agriculture (Introductory Science), 1; Commercial Geography,  $\frac{1}{2}$ ; Elementary Economics,  $\frac{1}{2}$ .

*All students, who do not present the units specified in the above table of requirements for admission but who do present fifteen acceptable units, will be regularly admitted. Such students will, however, be required to elect in College courses that will fulfill the requirements specified, e. g., if a student enters with but two units of Language other than English, then he must include in his College course the equivalent of two units in foreign language. This provision materially widens the scope of electives that will be accepted for College entrance.*

1. Half units will not be accepted in Physics and Chemistry.
2. Students who present three units of Greek are required to



present only one unit of Science, but they must have a total of fifteen units.

3. For the foreign language requirement four units of Latin are preferred, at least two units urgently advised. Students intending to pursue the study of Latin in the University should present four units in Latin for entrance; those intending to pursue the study of Greek should present preferably three, at least two, units of Greek. It should be noted that matriculants in the Schools of Law and Medicine must present two units of Latin.

#### ADMISSION TO THE COLLEGE OF ENGINEERING.

Candidates for admission should present the following units:

|                                                       |   |
|-------------------------------------------------------|---|
| Mathematics (Algebra, Plane and Solid Geometry) . . . | 3 |
| Languages other than English, at least . . . . .      | 2 |
| English . . . . .                                     | 3 |
| History . . . . .                                     | 2 |
| Science (1 unit of Physics) . . . . .                 | 1 |
| Electives . . . . .                                   | 4 |

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15

Students presenting one unit in Chemistry for entrance may take qualitative analysis instead of elementary chemistry laboratory during their freshman year.

The electives are the same as for the College of Liberal Arts.

#### ADMISSION TO THE SCHOOL OF MEDICINE.

In addition to a regular four-year high-school course or equivalent, two years of college work are required, estimated at sixty semester hours. At least one unit of Latin must be presented for entrance. See page 210.

#### ADMISSION TO THE SCHOOL OF LAW.

Requirements for the School of Law are the same as for the College of Liberal Arts; with the proviso that at least two units of Latin are required among the units in foreign languages. *Beginning September, 1912, two years of college work will be required for admission.*

#### DESCRIPTION OF UNITS IN ENGLISH.

The National Conference on Uniform Entrance Requirements in English voted that the following requirement for the years 1913,



1914, and 1915 should be recommended to the constituent bodies for adoption:

Preparation in English has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

### English Grammar and Composition.

The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, paragraphs, and the different kinds of whole composition, including letter-writing, should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise narration, description, and easy exposition and argument based upon simple outlines. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

### Literature.

The second object is sought by means of two lists of books, headed respectively *reading* and *study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, he is further advised to acquaint himself with the most important facts in the lives of authors whose works he reads and with their place in literary history.

a. Reading—The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving him a first-hand knowledge of some of its best specimens. He should read the books carefully, but his attention

should not be so fixed upon details that he fails to appreciate the main purpose and charm of what he reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from which at least ten units\* are to be selected, two from each group.

I. The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Vergil's *Æneid*. The Odyssey, Iliad and *Æneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

II. Shakespeare's Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Cæsar.

III. Defoe's Robinson Crusoe, Part I; Goldsmith's Vicar of Wakefield; either Scott's *Ivanhoe* or Scott's *Quentin Durward*; Hawthorne's *House of the Seven Gables*; either Dickens' *David Copperfield*, or Dickens' *Tale of Two Cities*; Thackeray's *Henry Esmond*; Mrs. Gaskell's *Cranford*; George Eliot's *Silas Marner*; Stevenson's *Treasure Island*.

IV. Bunyan's *Pilgrim's Progress*, Part I; The Sir Roger De Coverley Papers in the Spectator; Franklin, *Autobiography* (condensed); Irving's *Sketch Book*; Macaulay's *Essays on Lord Clive and Warren Hastings*; Thackeray's *English Humorists*; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail*; either Thoreau's *Walden* or Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on Improving Natural Knowledge, A Liberal Education, and a Piece of Chalk; Stevenson's *Inland Voyage and Travels With a Donkey*.

V. Palgrave's *Golden Treasury* (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard*, and Goldsmith's *Deserted*

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\* Each Unit is set off by semicolons.

Village; Coleridge's *Ancient Mariner*, and Lowell's *Vision of Sir Launfal*; Scott's *Lady of the Lake*; Byron's *Childe Harold*, Canto IV, and *Prisoner of Chillon*; Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's *Raven*, Longfellow's *Courtship of Miles Standish*, and Whittier's *Snow-Bound*; Macaulay's *Lays of Ancient Rome*, and Arnold's *Sohrab and Rustum*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News From Ghent to Aix*, *Home Thoughts From Abroad*, *Home Thoughts From the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up At a Villa—Down in the City*.

b. Study. This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. For this close reading are provided a play, a group of poems, an oration, and an essay, as follows:

Shakespeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, and *Comus*; either Burke's *Speech on Conciliation With America*, or both Washington's *Farewell Address*, and Webster's *First Bunker Hill Oration*; either Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

## MATRICULATION SCHOLARSHIPS

The pupil in each graduating class of an accredited high school of Colorado, who has maintained the highest record in studies is entitled to a scholarship in the University of Colorado, consisting of remission of the annual tuition, for four years in the College of Liberal Arts, Commerce, Education or Engineering.

## SPECIAL STUDENTS AND ADVANCED STANDING

Special students who wish to become candidates for a degree must fulfill all requirements for admission and complete the prescribed courses in the regular manner. See page 54.

Students coming from institutions of like grade should bring certificates definitely stating the amount of work done in each subject. Real equivalents will be accepted.

## SCHOOLS SEEKING TO BE ACCREDITED BY THE UNIVERSITY OF COLORADO

The aim of the High-School Committee of the University is that the list of Accredited High Schools shall be in a sense a roll of honor, a list of schools whose standing is in no way doubtful. In pursuance of this ideal a school that is not clearly strong in the support of its community, in organization, in teaching force, in standards of scholarship, in equipment and in school tone and spirit cannot be placed or retained on the list. Wherever there is a reasonable doubt in respect to any of these particulars, the committee will feel justified in dropping any school from the list or in leaving it in the waiting class. The list will be revised each year in February. It is hoped that the following statements will help to a clearer understanding of the governing principles of the High-School Committee, and may indicate some specific aims for the guidance of school officers:

1. There should be in any community, supporting a High-School, something of enthusiasm for the school, some pride in it, and a well-marked willingness, coupled with the ability to spend money and to spend it intelligently. The attitude toward the teacher should be one of consideration and co-operation.

2. The location and construction of the buildings; the lighting, heating and ventilation; the nature and care of the lavatories, the corridors, closets, water supplies, school furniture, apparatus must be such as to insure hygienic conditions for both pupils and teachers.

3. The library, the laboratory and all other equipment must be adequate to the needs of instruction. They should be much more than barely adequate.

4. The teaching staff should consist of at least three teachers of academic preparation equivalent to that usually represented by the B.A. degree. They should have had some professional training and should have more than average enthusiasm for their work.

5. It is strongly advised that no teacher be required to teach more than five periods per day. No school will be considered which requires more than six periods of any teacher.

6. No school will be considered whose records show an abnormal number of pupils per teacher.

7. It is expected that there will be an earnest spirit of co-operation between teachers and teachers, and between teachers and pupils, and that the intellectual and moral tone of the school will be high.

8. A school asking to be accredited should have been completely organized on the above basis long enough to have graduated classes for two years, and should have a creditable class for graduation in the year in which it makes its application. A school some of whose graduates have gone on to higher institutions is more acceptable than one of which this is not true.

9. The high school should have a sound and well-balanced course of study, and graduation from the school should be based upon not less than fifteen units.

#### \*ACCREDITED SCHOOLS

Alamosa High School.  
Arvada High School.  
Aspen High School.  
Berthoud High School.  
Brighton High School.  
Canon City High School.  
Central City High School.  
Cheyenne (Wyo.) High School.  
Colorado City High School.  
Colorado Springs High School.  
Cripple Creek High School.  
Delta High School.  
Denver High School, East Side.  
Denver High School, Manual Training.  
Denver High School, North Side.  
Denver High School, South Side.  
Denver High School, West Side.  
Douglas County High School (Castle Rock).  
Durango High School.  
Eaton High School.  
Fort Collins High School.  
Fort Morgan High School.  
Georgetown High School.  
Glenwood Springs High School.  
Golden High School.  
Grand Junction High School.  
Greeley High School.  
Gunnison High School.  
Holly High School.  
Huerfano County High School (Walsenburg).



Idaho Springs High School.  
Lafayette High School.  
Lamar High School.  
Las Animas High School.  
Leadville High School.  
Littleton High School.  
Logan County High School (Sterling).  
Longmont High School.  
Loveland High School.  
Manitou High School.  
Monte Vista High School.  
Montrose High School.  
Otero County High School (La Junta).  
Ouray High School.  
Paonia High School.  
Pueblo High School, District No. 1.  
Pueblo High School, District No. 20.  
Rocky Ford High School.  
Saguache County High School (Saguache).  
Salida High School.  
Sedgwick County High School (Julesburg).  
South Canon City High School.  
State Preparatory School, Boulder.  
Telluride High School.  
Trinidad Public High School.  
Victor High School.  
Wheat Ridge High School (Alcott).  
Miss Wolcott's School, Denver.  
Windsor High School.  
Wolfe Hall, Denver.

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\* Arranged in alphabetical order.

### DORMITORIES

Students living on the campus are subject to the following rates  
Unfurnished rooms, including heat and light, men's dormitory, \$3.00  
per month for each student (care of room included); the woman's  
building and the woman's cottage, \$3.00 per month for each student.  
Room rent must be paid in advance for each semester.

Rooms will be assigned to the three upper classes of the University at the end of the year in the order of seniority. The remaining



rooms will be assigned at the beginning of the fall semester. Students who have engaged rooms must occupy them as early as the first day of the semester, or present satisfactory excuse for absence to the Secretary; otherwise they will be considered as not engaged. Occupants of rooms will be held responsible for damage. Before taking possession of rooms in the men's dormitory, each student will deposit with the Secretary of the Board of Regents \$5.00. The money will be returned upon vacating the room, less such portion thereof as may have been set aside for repairing damages. Facilities for obtaining furniture and supplies are abundant in Boulder, and the rates are reasonable.

Each of the women's dormitories is under the supervision of a matron. The men's dormitory is governed by a House Committee, elected by the students residing there; this committee acts in conjunction with a committee of the Faculty.

### EXPENSES

Students not living on the campus may obtain room and board in private families at \$4.50 per week and upward. These rates may be greatly reduced by the formation of students' boarding clubs. Recently a statement of expenses at the University was asked from the students. The items included room, board, laundry, books, and all other expenses except fees, tuition in the professional schools, railroad fare and clothing. Out of the whole number making returns ten per cent. reported an annual expenditure of less than \$125, thirty-one per cent. of less than \$200; eighty per cent. of less than \$350. and 97 per cent. of less than \$500.

### SPECIAL RAILROAD RATES

The Colorado & Southern Railway and The Denver and Interurban Railway sell students' commutation tickets at the following rates:

#### 8-RIDE TICKETS—30-DAY STUDENTS' COMMUTATION.

| From Boulder, Colo., to | Rate.  |
|-------------------------|--------|
| Berthoud, Colo. ....    | \$3.25 |
| Denver, Colo. ....      | 4.00   |
| Lafayette, Colo. ....   | 3.00   |
| Longmont, Colo. ....    | 2.80   |
| Louisville, Colo. ....  | 2.50   |
| Loveland, Colo. ....    | 4.50   |

The limit of these tickets is 30 days from date of sale, and they are not extended on any account, nor is any unused portion of them redeemed.

These tickets will be sold only on presentation of students' identification card (permit form 4), properly signed by the Secretary of the State University, to the person named thereon, and will only be good when presented with such permit and only for the transportation of the student named thereon.

Other commutation rates are also made for daily trips between above-named stations.

### TUITION AND FEES

#### COLLEGES OF LIBERAL ARTS, COMMERCE, AND EDUCATION.

|                                                                                                                                                                                                                                                 |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Matriculation (paid once).....                                                                                                                                                                                                                  | \$ 5.00 |
| Tuition, resident, per year.....                                                                                                                                                                                                                | 15.00   |
| Tuition, non-resident, per year.....                                                                                                                                                                                                            | 25.00   |
| Laboratory fees per semester [collected only from students who take the particular courses. The following fees include breakage deposits, etc., as well as charges for material, hence are in part returnable, if the student exercises care.]. |         |
| Physics, all laboratory courses, 50 per cent. returnable .....                                                                                                                                                                                  | 2.00    |
| Chemistry [Lecture hours are not counted]:                                                                                                                                                                                                      |         |
| General Inorganic, per credit hour, 25 per cent. returnable .....                                                                                                                                                                               | 3.00    |
| Qualitative Analysis, per credit hour, 25 per cent. returnable .....                                                                                                                                                                            | 3.00    |
| Organic Preparations, per credit hour, 25 per cent. returnable .....                                                                                                                                                                            | 3.00    |
| All other courses, per credit hour, 25 per cent. returnable .....                                                                                                                                                                               | 1.50    |
| Biology:                                                                                                                                                                                                                                        |         |
| Botany, any course, 25 per cent. returnable.....                                                                                                                                                                                                | 2.00    |
| Zoology, any course, 25 per cent. returnable.....                                                                                                                                                                                               | 3.00    |
| Histology and Embryology, 25 per cent. returnable .....                                                                                                                                                                                         | 2.50    |
| Education:                                                                                                                                                                                                                                      |         |
| Pedagogical Library Fee for each Pedagogical Course requiring duplicate books.....                                                                                                                                                              | 1.00    |

**Geology:**

|                                                    |      |
|----------------------------------------------------|------|
| General Geology, 60 per cent. returnable.....      | 5.00 |
| Mineralogy, 25 per cent. returnable.....           | 6.00 |
| Quantitative Mineralogy, 25 per cent. returnable.. | 6.00 |

**GRADUATE SCHOOL.**

|                                |       |
|--------------------------------|-------|
| Matriculation (paid once)..... | 10.00 |
| Diploma fee.....               | 10.00 |

**COLLEGE OF ENGINEERING.**

|                                         |       |
|-----------------------------------------|-------|
| Matriculation (paid once).....          | 5.00  |
| Tuition, resident, per year.....        | 15.00 |
| Tuition, non-resident, per year.....    | 25.00 |
| Fees, for material, etc., per year..... | 10.00 |

**SCHOOL OF MEDICINE.**

|                        |         |
|------------------------|---------|
| Tuition, per year..... | \$75.00 |
|------------------------|---------|

**SCHOOL OF LAW.**

|                        |       |
|------------------------|-------|
| Tuition, per year..... | 50.00 |
|------------------------|-------|

**ASSOCIATED STUDENTS.**

|                                                                                                                                                                                                                                                                                                                                        |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Annual fee for all students in all the Colleges and Schools [Recommended by the "Associated Students"; devoted entirely to student interests; entitles each student to free admission to all local events held under the auspices of the Associated Students, to copy of college weekly, etc. See "Associated Students," page 50]..... | 5.00 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|



# COLLEGE OF LIBERAL ARTS

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## FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

FRED B. R. HELLEMS, Ph.D., Dean,  
Professor of Latin.

J. RAYMOND BRACKETT, Ph.D.,  
Dean of the Graduate School; Professor of Comparative and English  
Literature.

IRA M. DELONG, M.A.,  
Professor of Mathematics.

\*CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

S. GRISWOLD MORLEY, Ph.D.,  
Acting Professor of Romance Languages.

GEORGE NORLIN, Ph.D.,  
Professor of Greek.

FRANCIS RAMALEY, Ph.D.,  
Professor of Biology.

MELANCHTON F. LIBBY, Ph.D.,  
Professor of Philosophy.

JOHN BURTON PHILLIPS Ph.D.,  
Secretary of the College of Commerce; Professor of Economics and  
Sociology.

JOHN BERNARD EKELEY, Ph.D.,  
Professor of Chemistry.

RUSSELL D. GEORGE, M.A.,  
Professor of Geology.

THEODORE D. A. COCKERELL,  
Professor of Systematic Zoology.

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\* On leave of absence, 1910-1911.

GEORGE M. CHADWICK,  
Professor of Music.

JAMES F. WILLARD, Ph.D.,  
Professor of History.

OLIVER C. LESTER, Ph.D.,  
Professor of Physics.

FRANK E. THOMPSON, B.A.,  
Secretary of the College of Education; Professor of Education.

JUNIUS HENDERSON, B.A.,  
Professor of Natural History and Curator of Museum.

JOHN S. McLUCAS, M.A.,  
Professor of English.

GRACE FLEMING VAN SWERINGEN, Ph.D.,  
Professor of German.

MILO G. DERHAM, Ph.D.,  
Professor of Latin.

LAWRENCE W. COLE, Ph.D.,  
Professor of Psychology and Education.

\*RALPH D. CRAWFORD, M.A.,  
Assistant Professor of Geology.

S. ANTOINETTE BIGELOW, M.A.,  
Assistant Professor of Literature; Dean of Women.

CHARLES H. WILLIAMS, B.A., B.S. in Ed.,  
Assistant Professor of Education.

FORDYCE P. CLEAVES, M. A.,  
Instructor in Oratory.

CHARLES B. DYKE, M.A.,  
Instructor in Education.

\*MARGARET S. CARHART, M.A.,  
Instructor in English.

JOSEPH L. KINGSBURY, B.A.,  
Instructor in History.

WHITFORD H. SHELTON, M.A.,  
Instructor in Romance Languages.

WILFRED W. ROBBINS, M.A.,  
Instructor in Biology.

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\* On leave of absence, 1910-1911.



HARRY A. CURTIS, B.S. (Ch.E.), M.A.,  
Instructor in Chemistry.

ADOLPH G. PIERROT, Ph.B.,  
Instructor in English.

WILLIAM R. BRACKETT, B.A.,  
Instructor in Physics.

MILDRED S. MCARTHUR, M.A.,  
Instructor in German.

DAVID J. MACDONALD, M.A.,  
Instructor in Education.

EASLEY S. JONES, M.A.,  
Instructor in English.

ELVA COOPER, M.A.,  
Instructor in Mathematics.

ARNOLD J. LIEN, M.A.,  
Instructor in Economics.

F. M. HANDY, B.A.,  
Instructor in Geology.

WILLIAM V. CASEY.  
Instructor in Education.

MARGARET L. WHEELER, M.A.,  
Instructor in English.

GERARD L. C. M. VAN ROSSEN HOOGENDIJK, Ph.D.,  
Instructor in Chemistry.

CLEOPHILE BELL, M.A.,  
Assistant in Literature.

ETHEL R. FORD, B.A.,  
Assistant in Literature.

GLADYS E. SHUFELT, M.A.,  
Assistant in Mathematics.

HELEN O. COATES,  
Assistant in Romance Languages

LOUISE L. TOURTELLOTTE, B.A.,  
Assistant in Biology.

WARREN E. WATKINS, B.S.  
Assistant in Biology.

LORENA UNDERHILL, Ph.B.,  
Assistant in Philosophy.

CHARLES F. POE,  
Assistant in Chemistry.

WINTHIROP W. LEACH.  
Assistant in Chemistry.

PAUL M. DEAN, B.A.,  
Assistant in Chemistry.

PHILIP G. WORCESTER, B.A.,  
Assistant in Geology.

ROY M. BUTTERS, B.A.,  
Assistant in Geology.

COLIN B. GOODYKOONTZ,  
Assistant in History.

FREDERICK V. BLISS, B.S. (E.E.),  
Assistant in Physics.

CORNELIUS J. MARVIN,  
Assistant in Physics.

BULAH STEARNS-MACAULAY, B.A.,  
Assistant in English.

FERD J. LOCKHART,  
Assistant in English.

RUTH M. SHELEDY, B.A.,  
Assistant in German.

MARY E. LAKENAN, B.A.,  
Assistant in Psychology.

# COURSES OF STUDY

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## INTRODUCTORY

In connection with the new requirements for graduation the following general tendencies may be noted. An attempt has been made to map out, instead of the old elective plan, an intelligent and reasonable group system, which shall leave adequate freedom for individual needs and abilities, and, at the same time, prevent undesirable scattering of the student's energies. Provision is made for a combination of certain fundamental subjects and free electives with special work that shall be more scholarly and more finally valuable both for cultural attainments and scientific efficiency. In accordance with the latter idea students are required to take a large part of their group electives in their Junior and Senior years when it is possible to do real University work leading to the attainment of considerable knowledge and real power in some special line.

Moreover, the plan adapts itself readily to the needs of students who are looking forward to further work in professional and technical schools. Thus, within the College of Liberal Arts itself provision is made for a College of Commerce with various subdivisions and for a College of Education. By combining work in the College of Liberal Arts with work in the technical schools the student may attain the degree of B.A. and either the degree of B.S. in the College of Engineering, or the degree of LL.B. in the School of Law, or the degree of M.D. in the School of Medicine, in six years. In summary, then, we have a group system so arranged that the first two years in the College of Liberal Arts provide alike a foundation for more advanced work along University lines and a sound preparation for courses in the technical and professional schools. This latter phase of the plan is in accordance with the growing conviction that the College Course must do its part in the genuine preparation of students for a vocation, as well as offer every opportunity for the acquiring of a liberal education in the most enlightened sense of the word.

For the purposes of the present group system the various subjects are arranged as follows:

- I. DIVISION OF LETTERS: 6 groups.
- II. DIVISION OF SCIENCES: 7 groups.
- III. DIVISION OF PHILOSOPHY: 3 groups.
- IV. DIVISION OF HISTORY AND ECONOMICS: 2 groups.

With the same general purpose in view, but elaborately carried out, the College of Commerce and the College of Education have been established.

V. DIVISION OF COMMERCE, organized as the College of Commerce: 4 groups as follows: 1. Banking; 2. Manufacturing; 3. Journalism; 4. Trade, Transportation, Consular Service.

VI. DIVISION OF EDUCATION, organized as the College of Education: a professional group, and groups corresponding to those of the College of Liberal Arts.

Here may also be noted the arrangement for obtaining two degrees in six years by crediting courses in the professional schools as a substitute for the groups and electives of the last two years—an extension of the group system. See page 119.

- VII. ENGINEERING SUBJECTS: equivalent of two years.
- VIII. LAW SUBJECTS: equivalent of one year.
- IX. MEDICAL SUBJECTS: equivalent of two years.

### REQUIREMENTS FOR ADMISSION

See page 54.

### REQUIREMENTS FOR GRADUATION

To attain the degree of Bachelor of Arts students must complete one hundred and twenty hours according to the schedule printed below.

Attention is called to the following points:

1. Students must take fifty hours in some scheduled group; of these fifty hours they shall take at least thirty in the Junior and Senior years.

2. They may be allowed to substitute four hours of Literature for the required Composition of the Sophomore year, on recommendation of the head of the Department of English Language, if they

attain a satisfactory grade in English Composition of the Freshman year.

3. Students taking ten hours of either classics, mathematics, or science in the Freshman year, shall choose five hours in one of the other groups named, in the Sophomore year.

NOTE.—The various branches taught in the College of Liberal Arts are offered in courses of study. A *five-hour course*, as here used, means *five* exercises a week throughout a semester; a course in which the class meets the instructor *once* a week is a *one-hour course*. Three *five-hour courses* successfully pursued for one semester would entitle the student to *fifteen* hours' credit; for one year, to *thirty* hours' credit; and so on.

Freshmen students regularly take fifteen or sixteen hours per week, other classmen fifteen to seventeen.

On a day appointed before the close of each semester all students are required to record their election of studies for the next semester. Credit will be granted for such studies only as have been approved by the Committee on Courses. No student will be permitted to change his course, or drop any study, except by vote of the Committee on Courses.

SCHEDULE

FRESHMAN YEAR

|                                           |          |
|-------------------------------------------|----------|
| 1. ENGLISH LANGUAGE.....                  | 6 hours  |
| *2. CLASSICS, MATHEMATICS OR SCIENCE..... | 10 hours |
| 3. HISTORY OR ECONOMICS .....             | 6 hours  |
| 4. FREE ELECTIVES (8 or 10 hours).....    | 8 hours  |
| <hr/>                                     |          |
| 30 hours                                  |          |

SOPHOMORE YEAR

|                                           |          |
|-------------------------------------------|----------|
| 5. ENGLISH LANGUAGE OR LITERATURE.....    | 4 hours  |
| *6. CLASSICS, MATHEMATICS OR SCIENCE..... | 5 hours  |
| 7. PSYCHOLOGY OR PHILOSOPHY.....          | 5 hours  |
| 8. GROUP ELECTIVES (Major or Minor).....  | 10 hours |
| 9. FREE ELECTIVES (6 or 8 hours).....     | 6 hours  |
| <hr/>                                     |          |
| 30 hours                                  |          |

\* To be in different groups, e. g., if ten hours of classics are elected in the Freshman year, then five hours of Mathematics or Science must be elected in the Sophomore year.

## JUNIOR YEAR

|                                            |             |
|--------------------------------------------|-------------|
| 10. GROUP ELECTIVES (Major or Minor) ..... | 20-15 hours |
| 11. FREE ELECTIVES .....                   | 10-15 hours |
| <hr/>                                      |             |
| 30 hours                                   |             |

## SENIOR YEAR

|                                            |             |
|--------------------------------------------|-------------|
| 12. GROUP ELECTIVES (Major or Minor) ..... | 20-15 hours |
| 13. FREE ELECTIVES .....                   | 10-15 hours |
| <hr/>                                      |             |
| 30 hours                                   |             |

## GROUPS

## I. DIVISION OF LETTERS

|                                                                           |                                                           |
|---------------------------------------------------------------------------|-----------------------------------------------------------|
| GROUP (a) <i>Major</i> , Latin;                                           | <i>Minors</i> , { Greek,<br>European History.             |
| GROUP (b) <i>Major</i> , Greek;                                           | <i>Minors</i> , { Latin,<br>English Literature.           |
| GROUP (c) <i>Major</i> , German;                                          | <i>Minors</i> , { French,<br>History.                     |
| GROUP (d) <i>Major</i> , { Romance<br>Languages;                          | <i>Minors</i> , { Latin,<br>German.                       |
| GROUP (e) <i>Major</i> , { Compara-<br>tive and<br>English<br>Literature; | <i>Minors</i> , { History,<br>English Language.           |
| GROUP (f) <i>Major</i> , { English<br>Language;                           | <i>Minors</i> , { English Literature,<br>English History. |



## II. DIVISION OF SCIENCES

|                                       |                 |                              |
|---------------------------------------|-----------------|------------------------------|
| GROUP (g) <i>Major</i> , Mathematics; | <i>Minors</i> , | { Physics,<br>Astronomy.     |
| GROUP (h) <i>Major</i> , Chemistry;   | <i>Minors</i> , | { Physics,<br>Mathematics.   |
| GROUP (i) <i>Major</i> , Physics;     | <i>Minors</i> , | { Mathematics,<br>Chemistry. |
| GROUP (j) <i>Major</i> , Botany;      | <i>Minors</i> , | { Zoology,<br>Chemistry.     |
| GROUP (k) <i>Major</i> , Zoology;     | <i>Minors</i> , | { Botany,<br>Chemistry.      |
| GROUP (l) <i>Major</i> , Geology;     | <i>Minor</i> ,  | Chemistry.                   |
| GROUP (m) <i>Major</i> , Mineralogy;  | <i>Minors</i> , | { Geology,<br>Chemistry.     |

## III. DIVISION OF PHILOSOPHY

|                                      |                 |                           |
|--------------------------------------|-----------------|---------------------------|
| GROUP (n) <i>Major</i> , Philosophy; | <i>Minors</i> , | { Psychology,<br>Biology. |
| GROUP (o) <i>Major</i> , Psychology; | <i>Minors</i> , | { Philosophy,<br>Biology. |
| GROUP (p) <i>Major</i> , Education;  | <i>Minors</i> , | { Psychology,<br>Biology. |

## IV. DIVISION OF HISTORY AND ECONOMICS

|                                   |                                  |                               |
|-----------------------------------|----------------------------------|-------------------------------|
| GROUP (q) <i>Major</i> , History; | <i>Minors</i> ,                  | { Economics and<br>Sociology. |
| GROUP (r) <i>Major</i> ,          | { Economics<br>and<br>Sociology; | <i>Minor</i> , History.       |

# EQUIPMENT

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## LABORATORIES

**THE PHYSICAL LABORATORY**—The Department of Physics occupies the entire first floor, two hundred feet by sixty feet, of the Hale Science Building, with a large modern lecture room on the second floor. The laboratories are large and well supplied with gas, water, direct and alternating current, and the ordinary apparatus for students' use. There are rooms for advanced and research work equipped with special apparatus particularly in light and electricity. A well equipped shop and a department library also add greatly to the efficiency of the department.

**CHEMICAL LABORATORY**—The basement of the Chemistry Building contains a laboratory for organic and physiological chemistry, a laboratory for inorganic preparations and for assaying, a laboratory for sanitary water analysis, and the main stock and acid room. On the first floor are the laboratories for general chemistry and for qualitative analysis, a private laboratory, a laboratory for quantitative analysis, a balance room, a combustion room, and the stock distributing room. The second floor contains the main lecture room with an amphitheatre seating two hundred and fifty people; the lecture desk is supplied with water, gas, suction pumps, draught, and electric current; on this floor also are a room for the storage of lecture apparatus, a smaller lecture room seating eighty students, the chemical library, the professor's study and private laboratory, a laboratory for technical and gas analysis, and a laboratory for physical and electro-chemistry. Each desk in the various laboratories is equipped with gas, water, and sink, and, in the organic laboratory, with suction pumps. The ventilation is accomplished by the direct-indirect system, assisted by the hoods and a three horse-power electric motor and rotary fan. The laboratories for physical and advanced analytical chemistry are fitted up with the proper apparatus for thorough experimental work in these subjects.

The chemical library, to which students in the laboratories have access at any time, is considered one of the best in the West.

**BIOLOGICAL LABORATORY**—The Biological Laboratory occupies the third floor of the Hale Science Building. There are a large general laboratory, a special laboratory for advanced work, a stock room, a preparation room, herbarium, a lecture room, and two private rooms for the professors. The laboratory is provided with thirty-four microscopes, four microtomes, water baths, glassware, reagents, etc. A series of embryological models of the latest pattern and a limited number of models for teaching histology are provided. There is some apparatus for work in plant physiology, as auxanometer, centrifugal, klinostat, etc. Instruments for field work in plant and animal ecology are provided. There are two thermographs, a psychograph, and sets of thermometers, geotomes, photometers, etc. An electric arc lantern is used for projections. The collection of lantern slides is a large one and especially adapted for teaching the botany and zoology of the Rocky Mountain region.

The University maintains at Tolland, Colorado (altitude 8,889 ft.), a mountain laboratory for summer work in plant and animal ecology and taxonomy. Students expecting to teach botany and zoology in high schools are here given practical experience in the study of living things in their natural surroundings. The laboratory is well equipped for research work.

**GEOLOGICAL AND MINERALOGICAL LABORATORIES**—The west wing of the new fire-proof science building now houses the departments of Geology and Mineralogy.

The lower floor contains an assay laboratory, a furnace room with two three-muffle coal furnaces and a gas furnace, a balance and a stock room, a room for storing and trimming rough material, a private office and laboratory, a paleontological laboratory and a lecture and recitation room.

On the second floor are the library and reading room, a drafting room, offices and private laboratories, an apparatus room and a large lecture room fitted with oak cases for the working collections, lantern, geologic maps, structural models, etc.

The top floor is designed for mineralogy and petrography and contains a petrology lecture and microscope room, an instrument room, a specimen room, private office and laboratories, a stock room, spectroscopy room, quantitative mineralogy laboratory, balance room

and a determinative mineralogy laboratory. The determinative mineralogy laboratory provides desk room, complete blowpipe equipment and determinative apparatus for twenty-six students.

RESEARCH LABORATORIES—Three private laboratories, each designed to accommodate two or three students, and a research laboratory are now available for advanced students of the department.

By the addition of large oak cases which hold 15,560 specimens the Geology Department will now increase its working collections of minerals and rock specimens by approximately thirty-three per cent.

Four petrographical microscopes of the most approved type are available for optical mineralogy and petrography. A reflective goniometer and a machine for cutting sections of rocks and minerals have been added to the laboratory equipment of the Department. Equipment for advanced field work and geologic mapping includes traverse plane tables, Brunton pocket transits, aneroid barometers, Locke and Abney levels, steel tapes, a Stewart telemeter, drawing tables, pantagraph and planimeter. The library of the Department contains 2,500 volumes. It receives all United States and State Geological Survey reports and all important journals and magazines, as well as recent text and reference books on geology.

THE PSYCHOLOGICAL LABORATORY—The Psychological Laboratory occupies two rooms on the third floor of the Main Building. It is well equipped for instruction and training in physiological and experimental psychology. The equipment includes the apparatus necessary for general training courses in psychology and psychological methods, chronographs and recording appliances of various kinds, microscopic and lantern slides of brain sections, models, charts, a complete set of anthropometric instruments, etc. Instruments are provided for typical experiments in psychophysics, sensation, perception, association, reaction, and movement. Constant additions are being made to the equipment.

## MUSEUM AND CABINETS

THE ZOOLOGICAL COLLECTIONS include vertebrate skeletons and skulls, mounted mammals and study skins, mounted birds and study skins, eggs and nests, fishes, reptiles, amphibians, crustaceans, insects and mollusks. Especially important is the large collection of land, fresh-water and marine shells, particularly rich in Colorado

and Pacific Coast material, and fresh-water fishes from various parts of the world.

THE BOTANICAL COLLECTION consists of a large series of mounted specimens, including seed plants, lichens, fungi and algæ, a display case of tropical seeds and fruits, a representative series of tropical woods and a collection of economic woods of the United States.

THE GUGGENHEIM BIOLOGICAL COLLECTION, purchased with funds placed at the disposal of the Board of Regents by Hónorable Simon Guggenheim, United States Senator from Colorado, consists of a fine series of the nests and eggs of birds taken by Mr. Denis Gale at various altitudes, in Colorado, with the accompanying field notes; also of a valuable collection of mounted birds and mammals, chiefly from Colorado and adjacent states.

THE MINERALOGICAL AND GEOLOGICAL COLLECTION consists of a large series of typical rocks, minerals, Colorado ores, microscope sections of rocks, ores and minerals, wooden models of crystals, etc. They include both display and study specimens.

THE GUGGENHEIM MINERAL COLLECTION, the gift of Honorable Simon Guggenheim, consists of over 1,000 carefully selected type mineral specimens, which will be kept together for reference. It includes a large number of rare minerals not common in university cabinets, and is an extremely valuable addition to the equipment of the Department of Geology.

ETHNOLOGICAL COLLECTIONS—By co-operation with the School of American Ethnology the University has secured some specimens to illustrate the ancient cultures of the Southwest. This collection is being added to each year. At present there are three cases of display material.

\* THE PHOTOGRAPH AND LANTERN SLIDE CABINETS of the Biology and Geology departments and Museum contain several thousand negatives, prints and lantern slides illustrating various biological and geological phenomena.

THE PALEONTOLOGICAL COLLECTIONS contain great quantities of Colorado marine invertebrates, very large numbers of Tertiary insects and plants from the Lake Beds of Florissant, Colorado, Cretaceous plants from various parts of the state and from Kansas, Paleozoic plants from the Coal Measures of the eastern states, several



thousand Tertiary and Pleistocene marine invertebrates from the Atlantic and Pacific coasts, a representative collection of Paleozoic invertebrates from the eastern states and Mississippi Valley, a fine series of Mesozoic fossils from Europe and a few important fossil vertebrates, mostly from Colorado.

THE MUSEUM is temporarily located in the Hale Science Building, and contains the paleontological, biological and ethnological cabinets and part of the geological collections. A large portion of the material hereinbefore described is considered a part of the Museum, though some of the most valuable study collections belong to the Biology and Geology departments, and all of the material in the Museum is intended for the use of the various teaching departments, of the general public and of specialists working upon lines represented in the collections. About forty display cases contain suitable material on exhibition, the balance being in drawer cabinets, where it may be examined by students and others interested. Large quantities of duplicates are being collected for class use, research and exchange purposes. The Museum is at present the depository of the collections of the Colorado Geological Survey. Several loan collections are also in the cabinets.

For a number of years the nominal curator of the Museum, with members of the faculty and volunteer assistants, has been making short trips to various parts of the state for the purpose of collecting specimens and studying the natural phenomena of Colorado, and the material and notes thus obtained have formed the basis, wholly or in part, of many publications upon natural history subjects, which have appeared in *The University of Colorado Studies* and other periodicals. Early in 1909 arrangements were made for the Curator to devote his whole time to building up the Museum.

Among notable additions to the collections during 1910 were the following: About 10,000 recent and fossil shells from California, collected chiefly by the Curator and his wife, at their own expense; botanical and zoological material collected in New Mexico by the Curator and Mr. W. W. Robbins, of the Biology Department, in cooperation with the School of American Ethnology; botanical and zoological material collected in Central Colorado by the faculty and students of the Summer Biological Laboratory at Tolland; besides smaller but much appreciated donations by friends, among whom may be mentioned: Dr. H. W. Allen, J. B. Annear, J. P. Beatty, Robert Bell, Ellsworth Bethel, John J. Blanchard, Mrs. George Ben-



nett, N. de Witt Betts, Boulder Club, William Brackett, Prince Burnham, Professor T. D. A. Cockerell, R. H. Cressingham, I. C. Crawford, Edgerton Crouter, Albert Dakan, Terry Duce, Dr. Carl H. Eugenmann, R. Evert, J. P. Flynn, Frank Goddard, R. D. Goss, F. M. Green, Ernest Greenman, Norman E. Hinds, Miss Carrie Lang, C. F. Lakes, Mrs. Max Lawrence, E. B. Lynch, Harvey C. Markman, C. J. Marvin, Glenn Mott, F. C. Moys, Allen McArthur, Wm. McArthur, Thos. A. McBeth, Mrs. Lucy Prince McIntyre, W. H. McLeod, F. F. Nickell, E. C. Regneir, Fred Richter, J. L. Riland, Frank Rohwer, Joseph Rowland, Willard Rusk, A. C. Smith, C. C. Smith, D. W. Spangler, J. F. Sunbye, William Thorn, Dr. E. B. Trovillion, United Oil Co., H. E. Vernia, O. H. Wangelin, E. R. Warren, F. E. Wheeler, Charles H. Wing. Fine collections of fossils and recent mollusks have been received, in exchange for Colorado and California material, from the following persons and institutions: S. S. Berry, Harold Hannibal, Cr. Caziot, N. W. Lermond, Geological Institute of Mexico, Sedgwick Museum (Cambridge University), United States National Museum, University of Zurich.

### ART COLLECTIONS

THE PHILLIPS ART COLLECTION is named from the donors, Mr. and Mrs. Ivers Phillips, of Boulder. It is contained in two rooms on the second floor of the Main Building and one on the third floor. Room 23 is devoted to the Dutch, German, French and English schools of painting; room 24 to Italian and Spanish painting; room 31 to architecture and sculpture. The masters of painting are represented by Braun autotypes, framed in oak under glass; some are of the largest size ever produced, and all are inalterable in carbon. The works in architecture and sculpture are represented by large photographic reproductions, casts and several hundred glass transparencies. The finest casts are Henning's restoration of the entire Parthenon frieze with that sculptor's designs for the missing slabs; the Portland vase in color; the vase of Sosibius; heads from Trajan's column; bas-reliefs by Donatello, Michelangelo, Flaxman and Wyon; Madonnas by Lucca della Robbia and Michelangelo; heads of Sappho, Juno, Jupiter, Minerva, Eros, Niobe, and the Hermes of Praxiteles; full size statues of Narcissus, Hermes, Apollo Belvidere, Diana of Versailles, Venus de Medici, etc.

Persons willing to contribute to a museum or library of fine arts

are requested to confer with the curator, Professor J. Raymond Brackett.

Lectures covering the main subjects illustrated in the collection will be given in the department of Comparative and English Literature; see also courses in Greek and Roman Archæology. In 1910 Professor Lewis Frederick Pilcher of Vassar College gave a course of five lectures on problems in Greek sculpture and a course of seven lectures on the psychology of Art.

THE FARNSWORTH COLLECTION OF COINS was given to the University by Dr. Wilson A. Farnsworth, of Cæsarea, Cappadocia. It consists of some three hundred and fifty Greek, Roman, Byzantine, Mediæval, and modern coins. The Greek coins illustrate autonomous, regal and imperial series, and are of silver and bronze; among them are rare coins from Egypt, Syria, Asia Minor, Macedonia and Greece. The Roman coins illustrate family and imperial series of silver and bronze. The collection is on exhibition in the rooms of the Greek department.

GREEK PHOTOGRAPHS—The department of Greek has added to its equipment a collection, almost complete, of photographs of sculptures in the Museum at Athens, as well as excellent photographs of representative statuary in the principal museums of Europe. The department has also a collection of more than two hundred photographs illustrating the scenery of Greece. From most of these, lantern slides have been made.

### ARCHÆOLOGICAL INVESTIGATIONS

The University of Colorado is undertaking, in collaboration with the School of American Archæology, a series of studies in the ancient culture history of the State. A field expedition was conducted in the McElmo district in Montezuma County in 1908. A group of ancient ruins was excavated and the material obtained has been placed in the University Museum. Students of the University were offered the opportunity here afforded for field work. The University is also assisting in the compilation of a record of all the archæological sites in the State.

A course of thirty lectures on American Archæology is given in 1910-1911 at the University by officers of the School of American Archæology. The course includes twenty lectures on "The Indian Cultures of the Southwest," by J. P. Harrington, October 17th to

November 11th, and ten lectures by Dr. Edgar L. Hewitt, Director of the School of American Archæology, on "Introduction to American Archæology," May 8th to 19th.

### ORDER OF DESCRIPTION OF COURSES

The various courses offered in the College of Liberal Arts are described in the following order:

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
| Greek.                                      | Physics.                               |
| Latin.                                      | Chemistry.                             |
| Hebrew.                                     | Biology.                               |
| German Language and Literature.             | Geology and Mineralogy.                |
| Romance Languages—French, Spanish, Italian. | Philosophy, Logic and Ethics.          |
| Comparative and English Literature.         | Psychology.                            |
| English Language.                           | Education.                             |
| Oratory and Expressive Reading.             | History.                               |
| Mathematics.                                | Economics, Sociology.                  |
|                                             | Music.                                 |
|                                             | Electives in the Professional Schools. |

## \*DESCRIPTION OF COURSES

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### GREEK

- †1-2. ELEMENTARY COURSE. *First and second semesters. 11:00. 5 h. each semester.*  
Goodwin's Grammar and Xenophon's Anabasis.
- †3. HOMER'S ODYSSEY. *First semester. 9:00. 3 h.*  
Careful study of selected books.
- †4. LYSIAS' ORATIONS AND REVIEW OF GREEK GRAMMAR. *First semester. 9:00. 2 h. For freshmen.*
5. HISTORY OF ATHENS. *First semester. 9:00. 3 h. Open to all.*  
Lectures with assigned readings on the constitutional, political, and literary history of the Ancient City. No reading of Greek required.
6. PLATO. *Second semester. 9:00. 3 h. For freshmen.*  
The Apology and Crito with selections from the Phædo.
7. TRAGEDY. *Second semester. 9:00. 2 h. For freshmen.*  
Sophocles' Antigone or Euripides' Medea with introductory lectures on the Greek Drama.
8. PLATO. *First semester. 11:30. 3 h.*  
Rapid reading of selections.
9. ARISTOPHANES. *First semester. 11:30. 2 h.*  
Selected comedies.
10. DEMOSTHENES. *First semester. 10:00. 3 h.*  
Oration on the crown.
11. PASTORAL POETRY. *First semester. 10:00. 2 h.*  
Theocritus, Bion and Moschus.

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\* Courses for Graduates only are listed and described under Graduate School.

† Courses 1-2 are offered for students who come to the University without preparation in Greek. Upon the completion of these courses they are prepared to enter courses 3 and 4. Courses 3 and 4 are also for freshmen who enter the University with at least two units of Greek.

12. PLATO. *Second semester*. 10:00. 3 h.  
Interpretation of the Republic with lectures on Platonism.
13. THUCYDIDES. *Second semester*. 10:00. 2 h.  
Selected books.
14. LYRIC POETRY. *First semester*. 10:00. 3 h.  
Early Lyric Poets, with introduction to Pindar and Bacchylides.
15. TRAGEDY. *First semester*. 10:00. 2 h.  
Advanced course; Æschylus and Euripides.
16. PROSE COMPOSITION. *Second semester*. 11:00. 2 h.
17. ARISTOTLE'S POETICS. *Second semester*. 2:30. 1 h.
18. HISTORY OF GREEK LITERATURE. *First semester*. 3:30. 3 h.  
Lectures with reading of best English translations of Greek authors.
19. HISTORY OF GREEK LITERATURE. *Second semester*. 3:30. 2 h.  
Continuation of 18.
20. HISTORY OF GREEK ART. *First semester*. 2:30. 2 h.
21. CLASSICAL MYTHOLOGY. *Second semester*. 3:30. 2 h.  
Lectures and readings; interpretation of myths.

For courses for graduates only, see page 143.

## LATIN

1. CICERO. *First semester*. 11:30. 3 h.  
Cicero, De Senectute, De Amicitia; the relation of these works to Cicero's other writings. Latin grammar, prose composition.
2. OVID. *First semester*. 11:30. 2 h.  
Selections from Ovid; the influence of Ovid on modern literature; introduction to classical mythology.
3. LIVY. *Second semester*. 11:30. 3 h.  
Selections from the earlier books; Latin prose composition.
4. TERENCE AND PLAUTUS. *Second semester*. 11:30. 2 h.  
One play of each author; the place of Terence and Plautus in literature; introduction to Roman comedy.
5. HORACE. *First semester*. 8:00. 3 h.  
The Odes and Epodes; introduction to Latin lyrical poetry; Latin versification.

6. LATIN PROSE. *First semester.* 8:00. 2 h.
7. TACITUS. *Second semester.* 8:00. 2 h.  
Tacitus, Agricola and Germania; the spread of Roman influence in the West.
8. LATIN PROSE AND SIGHT TRANSLATION. *Second semester.* 8:00. 3 h.
9. LATIN LITERATURE. *Both semesters.* 2:30. 3 h.  
The outlines of the literature with its historical setting. The course is based on Latin selections.
10. ROMAN HISTORY. *First semester.* 10:00. 3 h.  
Outlines of Roman History; lectures and reports on the sources; the history of Rome from its foundation to 476 A. D.
11. ROMAN SATIRE. *First semester.* 8:00. 3 h.  
Horace, Juvenal, Persius; the origin and development of satire with a critical estimate of the historical value of the content.
12. TACITUS AND PLINY. *First semester.* 8:00. 2 h.  
Tacitus, Histories, book I; Pliny, Letters, book X; introduction to the prose of the Silver Latinity; Rome and the provinces.
13. ROMAN COMEDY. *First semester.* 1:30. 3 h.  
Terence and Plautus, six plays; a comparative study of these authors from the literary as well as the morphological side.
14. RHETORICAL TREATISES. 5 h.  
Horace, Arts Poetica; Cicero, De Oratore, Brutus; Quintillian, book X; Tacitus, Dialogus de Oratoribus; principles of literary criticism; the debt of the above writers to Greek sources.
15. CATULLUS. *First semester.* 11:30. 2 h.  
Latin lyrical poetry.
16. ROMAN PHILOSOPHY. 5 h.  
Lucretius, De Rerum Natura; Cicero, De Natura Deorum, De Finibus and Tusculanæ; Seneca, selections; the place of Roman philosophy in the history of philosophy; the part played by these writers individually.
17. ROMAN HISTORY. 63 B. C. to 37 A. D. 3 h.  
Sallust's Catiline; Cicero's Letters (Abbot's selections); Tacitus, Annals, books I—VI; Velleius Paterculus, book II.
18. TIBULLUS AND PROPERTIUS. 2 h.  
Selected odes; special studies in Latin lyrical poetry.



## 19. MARTIAL AND PLINY. 2 h.

Selected epigrams and letters; private life under the early Roman Empire.

## 20. LATIN LITERATURE IN ENGLISH. 3 h.

The course is based on standard translations and is intended for students not taking Latin.

21. LIVY. 2 h. *For advanced students.*

Book I as a basis for the consideration of the problems of early Roman history.

## 22. SUETONIUS. 2 h.

Selected lives; introduction to the history of the Empire

23. TEACHERS' TRAINING COURSE. *Second semester.* 3 h. *For advanced students.*

Lectures, reviews of text-books; practical work in teaching under supervision.

## 24. ADVANCED LATIN PROSE. 2 h.

Stylistic analysis of Latin authors; the writing of Latin prose; problems in syntax.

## 25. GREEK AND ROMAN ARCHÆOLOGY. 2 h.

An elementary course in architecture, sculpture and painting.

For courses for graduates only, see page 143.

## \*HEBREW

1. BEGINNERS' COURSE. *First semester.* 1:30. 3 h.

Introductory lectures on Semitic life and literature; study of Genesis, Chapters 1-8. Harper's Method and Manual with Elements of Hebrew. 1910.

2. COURSE 1 CONTINUED. *Second semester.* 8:00. 3 h.3. SECOND YEAR COURSE. *First semester.* 1:30. 3 h.

Introductory lectures on Semitic religions; review of grammar and syntax; translations in Old Testament histories. Kittells Text; Tregelles, Gesenius or Brown-Driver-Briggs Lexicon. 1911.

4. COURSE 2 CONTINUED. *Second semester.* 1:30. 3 h.

Translations in Psalms, Wisdom Literature, Minor Prophets.

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\* It is the object of this Department to give the student, in a two-year course, a good working knowledge of the Hebrew language and literature. It is designed especially to meet the wants of theological students, students preparing for missionary work, and those desiring to add this as a linguistic accomplishment.

## GERMAN LANGUAGE AND LITERATURE

- \*1-2. ELEMENTARY COURSE. *Both semesters.* 8:00, 11:30, 1:30. 5 h.  
Grammar, pronunciation, easy reading; practice in writing and speaking German.

- \*3-4. INTERMEDIATE COURSE. *Both semesters.* 8:00 and 11:30 M.  
W. F. 3 h.

Reading of selected masterpieces of German literature, such as Lessing's *Minna von Barnhelm*, Schiller's *Jungfrau von Orleans*, Ludwig's *Zwischen Himmel und Erde*, Freytag's *Die Journalisten*.

It is strongly recommended that course 3-4a accompany course 3-4.

Prerequisite: course 1-2, or two years of high school German

- 3-4a. GERMAN COMPOSITION. *Both semesters.* 8:00, 11:00. Tu, Th.  
Pope's German Composition, including German Themes and Letters. Practice in speaking German.

It is recommended that course 3-4a be taken parallel with course 3-4.

Prerequisite: course 1-2, or two years of high school German.

5. LESSING AS A DRAMATIST. *First semester.* 3 h.

Study of *Nathan der Weise* and *Emilia Galotti*.

Prerequisite: courses 3-4 and 3-4a.

6. SCHILLER'S *WALLENSTEIN* AND *DIE BRAUT VON MESSINA*. *Second semester.* 3 h.

Readings, recitations, and papers.

Prerequisite: course 5.

7. GOETHE'S DRAMAS, EXCLUSIVE OF *FAUST*. *First semester.* 3 h.

Prerequisite: course 5 or 6.

8. THE GERMAN DRAMA OF THE NINETEENTH CENTURY. *First semester.* 3 h. *Open to graduate students and seniors who read German with facility.*

Reading of representative plays and discussion of the problems which they present.

9. THE PHONETICS AND PRONUNCIATION OF GERMAN. *One semester.* 2 h.

Vietor's German Pronunciation, with additional exercises in reading German.

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\* The aim of courses 1-4a is to prepare the student to read the German language with facility, and to understand German at hearing.

10. GERMAN CONVERSATION. *One semester. 2 h.*
11. GOETHE'S FAUST; PARTS I AND II. *Second semester. 3 h. Open to graduate students and seniors.*
12. STUDIES IN THE HISTORY OF THE GERMAN NOVEL. *One semester. 3 h. Open to seniors and juniors who read German with facility.*  
Reading and discussion of selected works.
13. THE GERMAN NOVELLE. *One semester. 3 h. Open to seniors and juniors who read German with facility.*  
Reading and discussion of representative stories.  
This course alternates with course 12.
14. GERMAN LYRICS. *One semester. 2 h.*  
Prerequisite: course 3-4.
15. GERMAN BALLADS. *One semester. 2 h.*  
Prerequisite: course 3-4.
16. TEACHERS' COURSE. *Both semesters. 2 h.*  
The phonetics and pronunciation of German; methods of teaching German to foreigners; examination of grammars and readers; systematic study of one of the texts usually read in high schools.
17. THE DRAMAS OF RICHARD WAGNER. *One semester. 2 h. Open to seniors and juniors who read German with facility.*  
Given in 1910-1911. Not offered in 1911-1912.

For courses for graduates only, see page 144.

## ROMANCE LANGUAGES

### FRENCH

1. BEGINNER'S COURSE. *First semester. 10:00, 11:30, and 1:30. 5 h.*  
Fraser and Squair's French Grammar; Super's French Reader; Matzke's Primer of French Pronunciation. A course in grammar, pronunciation and sight reading for students who present German for admission to College.
2. COURSE 1 CONTINUED. *Second semester. 10:00, 11:30 and 1:30. 5 h.*  
Reading of Modern French prose; phonetic drill; committing to memory of selected passages; prose composition.

3. SECOND-YEAR COURSE. *First semester.* 9:00. 5 h.  
Modern French stories and plays to be selected from the works of Balzac, Daudet, Dumas, Feuillet, Pailleron, Maupassant; selected lyrics; prose composition; daily themes.
4. SECOND-YEAR COURSE CONTINUED. *Second semester.* 9:00. 5 h.  
One play each of Corneille, Racine, Victor Hugo, Molière; prose writings of the Romantic School; completion and review of French Grammar; prose composition twice a week.
5. THIRD-YEAR COURSE. *First semester.* 10:00. 3 h.  
Systematic reading of authors or by topics to be selected from the following and given in the third and fourth years: Molière, Victor Hugo, Modern Drama, Classic Tragedy, Romantic School, Lyric Poetry. 1911-1912, Classic Tragedy; Francois's Advanced Prose Composition.
6. THIRD-YEAR COURSE. *Second semester.* 10:00. 3 h.  
1911-1912, Eighteenth Century Literature; Francois's Advanced Prose Composition.  
See course 5.
7. HISTORY OF FRENCH LITERATURE. *First semester.* 10:00. 2 h.  
Lectures and reports.  
From the beginnings to the reign of Francis I.
8. HISTORY OF FRENCH LITERATURE. *Second semester.* 10:00. 2 h.  
Lectures and reports.  
From the reign of Francis I. to the present time.

For courses for graduates only, see page 146.

#### SPANISH

1. BEGINNER'S COURSE. *First semester.* 11:30. 3 h.  
Hills and Ford's Spanish Grammar; Hills' Spanish Tales for Beginners; grammar, pronunciation and sight reading.
2. COURSE 1 CONTINUED. *Second semester.* 11:30. 3 h.  
Modern Spanish novels and plays; practical exercises in composition and conversation based on Butler's Spanish Teacher.
3. SECOND-YEAR COURSE. *First semester.* 9:00. 2 h.  
Reading of standard authors; completion and review of Spanish grammar; Gil Blas.
4. SECOND-YEAR COURSE. *Second semester.* 9:00. 2 h.  
Spanish drama, prose and poetry; prose composition; two plays of Echegaray, Valera's Pepita Jimenez.

5. LOPE DE VEGA AND CALDERON. *First semester.* 2 h.
6. ADVANCED PROSE COMPOSITION. *Second semester.* 1 h.

For courses for graduates only, see page 146.

#### ITALIAN

1. BEGINNER'S COURSE. *First semester.* 2:30. 3 h.  
Young's Italian Grammar; Marinoni's Italian Reader; grammar, pronunciation and sight reading.
2. COURSE 1 CONTINUED. *Second semester.* 2:30. 3 h.  
Advanced composition; modern Italian novels and plays; De Amicis, *La vita militare*, three comedies of Goldoni.
3. DANTE'S DIVINE COMEDY. *First semester.* 2 h.
4. PETRARCH AND BOCACCIO. *Second semester.* 2 h.

For courses for graduates only, see page 146.

NOTICE—Students are recommended to take up the Romance Languages in the following order: French, Spanish, Italian. They should not elect courses simultaneously in Spanish and Italian without consulting the instructor.

#### COMPARATIVE AND ENGLISH LITERATURE

1. INTRODUCTION TO NARRATIVE AND LYRIC POETRY. *Throughout the year.* 1 h. *Open to freshmen.*
2. INTRODUCTION TO THE NOVEL. *Throughout the year.* 1 h. *Open to freshmen.*
3. THE ANALYSIS OF PLAY CONSTRUCTION. *Throughout the year.* 1 h.  
*Open to freshmen who enter with high standing in English.*
4. THE HISTORY OF ENGLISH LITERATURE. *Throughout the year.* 3 h.  
*Open to sophomores.*  
Lectures, readings and recitations.
5. ART FORM. *Throughout the year.* 1 h. *Open to all.*

The sources, effects and methods of composition in poetry illustrated by reference to architecture, sculpture and painting; the chief art works of every age. Lectures illustrated by lantern slides.

Raymond's *Genesis of Art-Form*; Goodyear's *History of Art*.



6. THE PRINCIPLES OF LITERARY ANALYSIS AND CRITICISM. *Throughout the year.* 1 h. *Open to sophomores.*  
Courses 4, 5 and 6 should be taken together as a five-hour course by those who choose Literature as a major.
7. AMERICAN AUTHORS. *Throughout the year.* 2 h.
8. WORDSWORTH. *First semester.* Tu. Th. 2 h.
9. SHELLEY. *Second semester.* Tu. Th. 2 h.
10. TENNYSON. *First semester.* Tu. Th. *For advanced students.*  
The Globe edition of Tennyson; the Cambridge edition of Browning. The Seminary Library contains many volumes of valuable Tennysonianana presented by members of the class of 1896, and publications of the Browning Society. 1909.  
Courses 10 and 11 require a preliminary training in literary method.
11. BROWNING. *Second semester.* Tu. Th. *For advanced students.*  
The Globe edition of Tennyson; the Cambridge edition of Browning. The Seminary Library contains many volumes of valuable Tennysonianana presented by members of the class of 1896, and publications of the Browning Society. 1909.  
Courses 10 and 11 require a preliminary training in literary method.
12. MILTON'S POETRY. 2 h. *For advanced students.* 1905.
13. VICTORIAN PROSE. *Throughout the year.* 2 h. *Open to seniors and juniors.*
14. SHAKESPEARE. *Throughout the year.* 5 h. *Open to graduates and advanced undergraduates.*  
All the works attributed to Shakespeare are read during the year. Studies in the style, diction and versification of the different periods. The establishment of the text. Interpretation of great dramatic types—history, comedy, tragedy. Wide reading and some original research.
15. THE GREAT DRAMA. *Throughout the year.* 5 h. *For graduates and advanced undergraduates.*  
The international aspects of the English drama; a reading course from the mystery plays to the twentieth century. 1909.
16. COMPARATIVE LITERATURE; EARLY LITERATURE AND ART. *Throughout the year.* 11:00. 3 h. *Open to all.*  
The lectures deal with the poetry of primitive peoples, of China, of Japan; with the special contributions to the evolution of literature made by Egypt, Babylonia, Judea, Arabia, India, Persia. The literature of each people is viewed in connection with other manifestations of the artistic impulse; the chief works in architecture, sculpture and painting. 1910.



17. **THE EPIC.** *Throughout the year.* 5 h. *For graduates and undergraduates.*

The Iliad, the Odyssey and the Æneid; the Divine Comedy; the great epics of all ages (in English). 1909.

18. **WORLD DRAMA.** *Throughout the year.* 5 h. *For graduates and advanced undergraduates.*

The development of the drama from the earliest times to the present; primitive drama; the literary drama of China, Japan, and India; the ancient classical drama; Calderon; Corneille, Racine, Molière, Victor Hugo; Lessing, Schiller, Goethe; Ibsen; Tolstoy; Echegaray; Rostand, Maeterlinck; D'Annunzio; Hauptmann, Sudermann. This is a reading course, including one hundred and twenty-seven plays (in English). 1909.

19. **MASTERPIECES OF PROSE FICTION FROM THE EARLIEST TIMES.** *Throughout the year.* 5 h. *Open to graduates and advanced undergraduates.*

Typical masterpieces from the Greek romances to Rolland.

For courses open only to graduates, see page 146.

## ENGLISH LANGUAGE

1. **FRESHMAN ENGLISH.** Nine sections. *Both semesters.* M. W. F. 8:00, 9:00, 10:00, 11:30. 3 h. *Required of all college freshmen.*

Text-book, daily themes, oral exercises.

2. **SOPHOMORE ENGLISH.** *Both semesters.* Tu. Th. 9:00. 2 h.

A continuation of course 1.

3. **ADVANCED COMPOSITION.** Two sections. *First semester.* Tu. Th. 10:00. 2 h.

4. **ADVANCED COMPOSITION.** Two sections. *Second semester.* Tu. Th. 10:00. 2 h.

See course 3.

5. **ARGUMENTATION AND DEBATE.** *First semester.* M. W. F. 2:30. 3 h.

At the end of the first semester seven students are selected from the membership of this class, to constitute the University debating squad. Those forming this squad will be given two additional credits. The course may be repeated, but no student shall receive more than a total of ten credits:

6. JOURNALISM. *Both semesters. M. W. F. 10:00. 3 h.*  
Lectures, reports, practical work.
- 6a. ADVANCED JOURNALISM. *Both semesters. Tu. Th. 2:30. 2 h.*  
See course 6.
7. HISTORY OF THE ENGLISH LANGUAGE. *First semester. 11:30. 2 h.*  
Brief review of linguistics and of the relations of the Indo-European languages; history of English grammatical forms, sentence structure, and vocabulary.
8. ANGLO-SAXON. *First semester. Tu. Th. 9:00. 2 h.*  
Bright's Anglo-Saxon Reader.
9. ANGLO-SAXON. *Second semester. Tu. Th. 9:00. 2 h.*  
Beowulf.
10. MIDDLE ENGLISH. *First semester. Tu. Th. 11:30. 2 h.*  
Emerson's Middle English Reader, supplementary reading, lectures, reports.
11. CHAUCER. *Second semester. Tu. Th. 11:30. 2 h. Not open to freshmen.*  
Skeat's Texts of Canterbury Tales, lectures, and reports.
12. SHAKESPEARE. *First semester. M. W. F. 11:30. 3 h. Not open to freshmen.*  
Rolfe's Texts and Dowden's Primer. The careful reading of three plays in class and the study of other plays read out of class.
13. SHAKESPEARE. *Second semester. M. W. F. 11:30. 3 h.*  
See course 12.
14. PRE-SHAKESPEAREAN DRAMA. *First semester. Tu. Th. 11:30. 2 h.*  
*Not open to freshmen.*  
Manly's Specimens of Pre-Shakespearean Drama, lectures, reports.
15. INTERPRETATION OF ENGLISH POETRY. *Second semester. Tu. Th. 11:30. 2 h. Not open to freshmen.*  
Manly's English Poetry, lectures, and reports.

### ORATORY AND EXPRESSIVE READING

1. PUBLIC SPEAKING. *First semester. W. or Th. 1:30. 1 h.*  
A course in the elements of public speaking, with weekly declamations and original orations.  
Emerson's Perfective Laws of Art, Vols. I and II.

2. PUBLIC SPEAKING. *Second semester. W. or Th. 1:30. 1 h.*  
A continuation of course 1.  
Extemporaneous speaking; briefs and forensics.  
Emerson's Perfective Laws of Art, Vols. III and IV.
3. ADVANCED ORATORY. *Both semesters. Hours to be arranged.*  
Special work for honor men, class and private.
4. DRAMATIC ART. *First semester. W. or Th. 3:30. 1 h.*  
Theses written and delivered before class; dramatic criticism.  
Curry's Imagination and Dramatic Instinct.
5. DRAMATIC ART. *Second semester. W. or Th. 3:30. 1 h.*  
A continuation of course 4.  
Readings; theses on dramatic subjects; dramatic criticism;  
Shakespeare.  
Curry's Imagination and Dramatic Instinct.
6. ELOCUTION AND THEORY OF EXPRESSION. *First semester. W. or Th. 2:30. 1 h.*  
Recitations and reading before class; drill in reading; thesis.  
Emerson's Evolution of Expression, Vols. I and II.
7. ELOCUTION AND THEORY OF EXPRESSION. *Second semester. W. or Th. 2:30. 1 h.*  
A continuation of course 6.  
Emerson's Evolution of Expression, Vols. III and IV.
8. VOICE CULTURE AND DRAMATIC ACTION. *Th. 8:00. 1 h.*  
Development of voice; voice criterions; personal appearance;  
physical culture for grace and responsiveness, based on classic models.

## MATHEMATICS

### FIRST SEMESTER

1. COLLEGE ALGEBRA. Two sections. 8:00, 9:00. 5 h.
3. ANALYTIC GEOMETRY. 9:00. 5 h.
5. INTEGRAL CALCULUS. 8:00. 5 h.
7. MODERN GEOMETRY. 10:00. 3 h or 5 h.
9. ELEMENTARY SOLID GEOMETRY. 11:30. 3 h.
11. MATHEMATICAL TEACHING. 11:30. 2 h.
13. SOLID ANALYTIC GEOMETRY. 8:00. 3 h. or 5 h.

## SECOND SEMESTER

2. COLLEGE TRIGONOMETRY. Two sections. 8:00, 9:00. 5 h.
4. DIFFERENTIAL CALCULUS. 9:00. 5 h.
6. DIFFERENTIAL EQUATIONS. 8:00. 5 h.
8. COLLEGE ALGEBRA. 10:00. 5 h.
10. SPHERICAL TRIGONOMETRY. 11:30. 2 h.
12. HISTORY OF MATHEMATICS. 11:30. 3 h.
14. a. THEORY AND PRACTICE OF ACCOUNTING. 11:30. 3 h.  
b. LIFE INSURANCE. 11:30. 2 h.

For courses for graduates only, see page 147.

Land Surveying 4 h., Topographical Surveying, 4 h., Drawing 3 h., and Dynamo Electrical Machinery 4 h., may be elected in the College of Engineering by students from the College of Liberal Arts.

Freshmen are eligible to courses 1, 3, 7, 9; 2, 8, 10, 14; but 3 presupposes 1 and 2, and 10 presupposes 1, 2, and 9.

## PHYSICS

- 1-2. GENERAL PHYSICS. *Both semesters.* Lecture 2 hours, recitations 2 hours. 4 h.

A general course extending throughout the year, covering the mechanics of solids, liquids, and gases, and the phenomena of heat, electricity, magnetism, sound, and light.

This course is intended not only to furnish an indispensable basis for the study of any branch of pure or applied science, but also as an elementary presentation of those facts and principles relating to the physical world which are to-day recognized as a part of the common knowledge of all educated persons. The lectures are fully illustrated by apparatus and experiments, thus enabling the student to observe personally most of those phenomena which have played an important role in the development of physical theories. The recitations are based upon the lectures and a text-book which the student is expected to study systematically in parallel with the lectures.

Prerequisite: an elementary knowledge of plane trigonometry.

Text-book: Hastings and Beach's General Physics.

- 3-4. GENERAL LABORATORY PHYSICS. *Both semesters. One three-hour period per week.* 1 h.

Elementary laboratory work in the subjects of mechanics, heat, sound, light, electricity, and magnetism. This course is designed to give the student a more intimate knowledge of physical laws and to familiarize him with instruments of precision and methods of measurement.

It is strongly recommended that courses 3-4 be taken in parallel with 1-2.

Prerequisite: an elementary knowledge of plane trigonometry.

5. DESCRIPTIVE ASTRONOMY. *Second semester.* 2 h.

The course is conducted by means of lectures and recitations, and is designed to furnish that amount of information upon the subject of astronomy which may fairly be expected of persons who have what is called a "liberal education." Some time is given to the solution of certain problems in practical astronomy, each student obtaining the necessary data from his own observations and the Ephemeris.

Prerequisite: an elementary knowledge of trigonometry.

6. THEORETICAL MECHANICS. *First semester.* 5 h.

Lectures with recitations based upon the lectures and a textbook.

A study of the motion and conditions of equilibrium of particles and rigid bodies. Emphasis is laid upon the fundamental physical principles of the subject and upon the fact that the mathematical processes involved are simply an easy means of arriving at an understanding of a physical problem. An endeavor is also made to impart to the student a certain facility in translating physical conceptions into mathematical symbols and mathematical formulæ into concrete ideas.

Prerequisite: differential and integral calculus.

7. THEORY OF ELECTRICITY AND MAGNETISM. *First semester.* 4 h.

Lectures and recitations.

An elementary presentation of the mathematical theory of electricity and magnetism and the theory of electrical instruments. Among the subjects treated are the following: a brief discussion of the theory of errors, with special application to measurements made in the electrical laboratory; the general principles of electro-statics, including Gauss' Theorem and its applications; condensers and dielectrics; magnetism and the properties of magnets; laws of the electric current; energy of the electric current; magnetic and electro-magnetic induction;



magnetic effects of electric currents; thermoelectric currents; the general theory of several instruments of fundamental importance in electrical measurements; electric and magnetic units.

Prerequisites: courses 1 and 2, or their equivalent, and differential and integral calculus.

- 8-9. ELECTRICAL MEASUREMENTS. *Both semesters.* 3 to 6 h. to count as 1 to 3 h.

A laboratory course intended to accompany and to supplement course 7.

10. THEORY OF ELECTRICITY AND MAGNETISM. *Second semester.* 2 or 3 h.

The course begins by emphasizing and elaborating the most important topics of the preceding course. Many omitted topics are also taken up, after which the course proceeds to the more advanced parts of the subject. Courses 7 and 10 are designed to furnish a thorough knowledge of fundamental facts and principles and a preparation for the further study of the most advanced electric and magnetic theory.

- 11-12. INTRODUCTION TO THEORETICAL PHYSICS. *Both semesters.* 3 h. Lectures, recitations, and parallel reading.

A course designed to give the student a wider knowledge of modern physical theories and to enable him to read with some ease the current literature and advanced treatises on theoretical physics. Among the subjects considered are the following: mechanics; vector analysis; kinetic theory of gases, thermodynamics; theory of light; theory of electricity and magnetism.

Prerequisites: differential and integral calculus.

- 13-14. ADVANCED EXPERIMENTAL PHYSICS. *Either or both semesters.*

Laboratory work on selected problems of considerable experimental difficulty, involving a somewhat advanced knowledge of theoretical physics.

Hours and credit to be arranged.

15. THE THEORY OF ELECTRONS. *Second semester.* 3 h.

A course of lectures and parallel reading dealing with the evidence which has led to the idea of the electron and to the atomic structure of electricity. The discharge of electricity through gases, radioactivity, the corpuscular theory of matter, and the bearing of the electron theory on the explanation of various other physical phenomena are also considered.



16. THE TEACHING OF PHYSICS. *Second semester.* 2 h.

This course is designed, primarily, for those who expect to teach Physics in secondary schools. Sources of material, methods, aims, laboratory equipment and instruction, things which should be emphasized, those which may be omitted, etc., will be considered both by lectures and by reports and discussions. Members of the class will also make a study of recent criticism of secondary Physics teaching with the view of arranging a course which will be satisfactory both to the high school and the college.

## 17. THEORETICAL MECHANICS—STATICS; CENTERS OF MASS; MOMENTS OF INERTIA.

A course of lectures and recitations based upon both the lectures and a text book.

18. VECTOR ANALYSIS. *Both semesters.* 2 h.

A study of the system of Vector Analysis developed by Gibbs, with applications to problems of mathematical physics.

Prerequisite: courses 6, 7, 11, 12 and calculus.

For courses for graduates only, see page 149.

## CHEMISTRY

1. GENERAL INORGANIC CHEMISTRY. *Both semesters.* 11:30. 3 h.

A course of lectures and recitations dealing with the laws and theories of chemistry, together with a study of the elements and their most important compounds.

This course is especially designed for those who have not studied chemistry. Those electing course 1 must also elect course 2. Those presenting satisfactory high school credits may select courses 3 and 4 instead of 2.

2. GENERAL INORGANIC CHEMISTRY. *Both semesters.* Any two periods. 8:00 or 1:30. 2 h.

A detailed laboratory course supplementing course 1.

3. QUALITATIVE ANALYSIS. *First semester.* Any two periods. 8:00 or 1:30. 2 h.

A course in the identification and separation of the more common metals and acids.

4. QUALITATIVE ANALYSIS. *Second semester.* Any two periods. 8:00 or 1:30. 2 h.

A continuation of course 3.

- 5a. QUANTITATIVE ANALYSIS. *First semester.* Any three periods.  
8:00 or 1:30. 3 h.  
Laboratory. Gravimetric.  
A beginners' course in quantitative analysis, comprising the more important separations and determinations.
- 5b. QUANTITATIVE ANALYSIS. *First semester.* 10:00. 2 h.  
Lectures.  
A course in chemical calculations together with the theory of precipitation and other chemical theories and laws relating to gravimetric analysis. This course must be taken with course 5a.
- 6a. QUANTITATIVE ANALYSIS. *Second semester.* Any three periods.  
8:00 or 1:30. 3 h.  
Laboratory. Volumetric.  
A course on the preparation of standard solutions and their applications in analysis.
- 6b. QUANTITATIVE ANALYSIS. *Second semester.* 10:00. 2 h.  
Lectures.  
A course similar to 5b. This course must be taken with 6a.
7. ANALYSIS OF IRON AND STEEL. *Second semester.* Any two periods. 8:00 or 1:30. 2 h.  
A practical course in the laboratory methods in use in the leading steel works.  
Prerequisite: courses 5a, 5b, 6a, and 6b.
8. SANITARY WATER ANALYSIS. *Second semester.* Any two periods.  
8:00 or 1:30. 2 h.  
A course in the chemical examination of water with regard to its use for drinking purposes.  
Prerequisite: courses 5 and 6.
9. MINERAL WATER ANALYSIS. *Either semester.* Any two periods.  
8:00 or 1:30. 2 h.  
A course in the analytical methods used in the determination of the mineral and gaseous constituents of natural waters.  
Prerequisite: courses 5 and 6.
10. ORE ANALYSIS. *Either semester.* Any five periods. 8:00 or 1:30. 5 h.  
A course in the analysis of ores, slags, etc., by the technical methods in use in mills and smelters.  
Prerequisite: courses 5 and 6.

11. GAS ANALYSIS. *Either semester.* Any two periods. 8:00 or 1:30. 2 h.

A course in the methods for determining the constituents of gas mixtures, especially as applied to illuminating gas and furnace gases.

Prerequisite: courses 5 and 6.

12. ORGANIC CHEMISTRY. *First semester.* 2:30. 4 h.  
Lectures.

A study of the methods of preparation and the properties of the more important organic compounds. Special stress is laid upon the theories underlying the subject and the proofs of the constitution of most of the substances studied.

13. ORGANIC CHEMISTRY. *First semester.* Time to be arranged.  
Laboratory.

A laboratory course supplementing course 12, designed to give practice in organic laboratory methods.

This course may be taken with course 12.

14. LABORATORY PRACTICE IN ORGANIC PREPARATIONS. *Second semester.* Any three or five periods. 8:00 or 1:30. 3 h. or 5 h.

An advanced course in the preparation of typical aliphatic and aromatic compounds.

Prerequisite: course 12.

15. ULTIMATE ANALYSIS OF ORGANIC COMPOUNDS. *First semester.*  
Any two periods. 8:00 or 1:30. 2 h.

A course in the determination of carbon, hydrogen, nitrogen, sulphur and the halogens in organic compounds.

Prerequisite: courses 5, 6, and 14.

16. FOOD ANALYSIS. *Either semester.* Any three or five periods. 8:00 or 1:30. 3 h. or 5 h.

A course giving practice in food laboratory methods.

Prerequisite: courses 5, 6, 12 and 14.

17. PHYSICAL CHEMISTRY. *First semester.* 10:00. 3 h.  
Lectures.

A course presenting the conceptions of the modern physico-chemical theories concerning the states of aggregation of matter, solutions, thermo-chemistry, equilibria, and chemical kinetics.

18. PHYSICO-CHEMICAL LABORATORY METHODS. *First semester.* 8:00 or 1:30. 2 h.

Laboratory practice in the determination of densities, molecu-

lar weights, thermochemical and optical constants, and the study of chemical statics and kinetics.

This course must be taken with course 17.

19. ELECTROCHEMISTRY. *Second semester.* 10:00. 2 h.

Lectures.

A study of the phenomena of electrolysis, Faraday's Law, Hittorf's Transport-Numbers, the Law of Kohlrausch, the Solution Theory of Van't Hoff, the Dissociation Theory of Arrhenius, and the osmotic theory of the current of electric cells.

20. ELECTROCHEMICAL ANALYSIS. *Either semester.* Any two periods. 8:00 or 1:30. 2 h.

Laboratory practice in the determination and separation of the common metals by rapid electrolytic methods.

21. LABORATORY PRACTICE IN ELECTROCHEMISTRY. *Second semester.* Any two periods. 8:00 or 1:30. 2 h.

Exercises in electrical conductivity, Faraday's Law, Transport-Numbers, and the study of electrical potentials of cells.

Prerequisite: course 19, or may be taken with course 19.

22. PHYSIOLOGICAL CHEMISTRY. *Second semester.* Time to be arranged. 2 h.

Lectures.

This course is given primarily for medical students, but is open to students in other departments.

Prerequisite: courses 13 and either 14 or 15.

23. PHYSIOLOGICAL CHEMISTRY. *Second semester.* Time to be arranged. 2 h.

Laboratory.

This course is supplementary to course 22, and must be taken with it.

A laboratory study of the chemistry of enzymes, carbohydrates, salivary digestion, proteins, gastric and pancreatic digestions, bile, putrefaction products, feces, blood, milk, tissues, and urine.

24. INDUSTRIAL CHEMISTRY. *Second semester.* Time to be arranged. 2 h.

A lecture course on the principal chemical industries.

No laboratory period of less than three consecutive hours will be accepted.

## BIOLOGY

## 1. GENERAL BIOLOGY AND SANITARY SCIENCE.

- 1-2. GENERAL BIOLOGY. *Both semesters. Tu. Th. 1:30, lectures; M. W. F., laboratory work one hour each day. 3 h. Open to all.*

A course consisting of lectures and laboratory work designed for those who wish to become acquainted with the principles of modern biology, with or without the intention of pursuing the subject farther. The course deals with animals and plants as living things, including discussions of life processes, relations to environment, adaptation, distribution, principles of heredity and evolution and the natural history of man. There is also offered a synopsis of classification and some account of the history of biology, with details concerning eminent naturalists.

The two-hour course in sanitary science is so arranged that it may be taken by those in biology, the two aggregating five hours. This combination is recommended as combining the theoretical and applied branches of biological science.

3. SANITARY SCIENCE. *First semester. Tu. Th. 2:30, lectures; quiz sections to be arranged at additional times. Open to all; recommended to freshmen.*

The germ theory; infection; immunity; resistance; cause, prevention and control of disease.

This course may be taken with the three-hour course in General Biology to count as five hours' required science of the freshman or sophomore year.

4. SANITARY SCIENCE. *Second semester. Open to those who have had course 3; others desiring to enter should first consult the professor.*

The control of disease by methods of public and personal hygiene; heredity and disease; eugenics; school hygiene; domestic hygiene. Food, water and milk supplies; vital statistics and their meaning; Public Health administration.

5. SEMINAR IN SANITARY SCIENCE. *First semester. For graduates and undergraduates.*

Prerequisites: general biology; physiology; elementary chemistry; sanitary science.



## II. BOTANY.

- 1-2 GENERAL BOTANY. *Both semesters. M. W. F. 9:00, lectures; Tu. Th. 8:00 to 9:50, laboratory. 5 h.*

Structure, behavior, life history and classification of plants.

Prerequisites: general biology and elementary chemistry.

- 3-4 BOTANY OF COLORADO. *Both semesters. M. W. F. 8:00 to 10:00. 3 h.*

The more important and conspicuous plants of the Rocky Mountain region; general principles of classification, evolution and geographical distribution; relation of plants to climate.

Prerequisites: courses 1 and 2 in General Botany.

5. FOREST BOTANY. *First semester. M. W. F. 9:00. 3 h. Open to students who have had general biology; others on consultation.*

Two recitations and one two-hour laboratory period.

Study of forests: structure, characteristics, development. The value of forests and forest products. Conservation of natural resources.

6. ECONOMIC BOTANY. *Second semester. M. W. F. 9:00. Open to students who have had general biology; others on consultation.*

A study of plant products useful to man: grains, fruits, garden vegetables, ornamental plants, textile fibers, spices, drugs, starches, vegetable oils.

7. PLANT PHYSIOLOGY. *First semester. For graduates and advanced undergraduates.*

- 8-9. BIOLOGICAL SEMINAR. *Both semesters. Tu. Th. 3:30.*

Critical reading of some recent work of exceptional merit in botany or zoology; individual reports; informal quizzes; occasional lectures.

10. BACTERIOLOGY.

This course is given by Dr. Clough T. Burnett in the second year of the medical course.

For courses for graduates only, see page 151.

## III. ZOOLOGY.

- 1-2 GENERAL ZOOLOGY. *Both semesters. M. W. F. 1:30-3:30. 3 h.*

The animal kingdom from the lowest to the highest group; structure; behavior; classification.

Prerequisites: general biology and elementary chemistry.



3. **PHYSIOLOGY.** *Second semester. M. W. F. 8:00.*  
The life activities of animals, especially man. Recitations; lectures; some demonstrations and laboratory work.  
Prerequisites: general biology and elementary chemistry.
- 4-5. **HISTOLOGY AND EMBRYOLOGY.** *Both semesters. M. Tu. W. Th. 4 h.*
- 6-7. **COMPARATIVE ANATOMY.** *Both semesters. 2 h. For graduates and advanced undergraduates.*
- 8-9. **BIOLOGICAL SEMINAR.** *Both semesters. Tu. Th. 3:30.*  
For an account of the course see under botany.
10. **HUMAN ANATOMY.** *Open to upper classmen who are also matriculated in the School of Medicine.*

For courses for graduates only, see page 151.

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Note—Students intending to specialize in biological subjects are advised to spend at least one summer at the Mountain Laboratory at Tolland, Colorado. (See Summer School announcement.)

## GEOLOGY AND MINERALOGY

### A. Courses for Undergraduates.

- 1-2. **GENERAL GEOLOGY.** *Both semesters. Lectures M. W. and F. 1:30; field or laboratory work, Tu. and Th. 1:30-4:30. 5 h. each semester.*  
The course will consist of a study of the principles of geology, with special reference to the geological history of North America. Field study will be an important feature of the course.
- 3-4. **GEOGRAPHIC GEOLOGY.** *Both semesters. Lectures M. W. 9:00; field or laboratory, F. 9:00-11:00. 3 h. each semester. Open to all who have not had course 1-2 or its equivalent.*

This course will be adapted to the needs of those who expect to teach physical geography or geology in the high schools. It will include a study of the atmosphere, the waters of the earth and their work as geological agents, the rocks, the agencies of geological and geographical change, and the development and history of the physical features of the earth. Large use will be made of the local field for illustrative purposes. This course may be taken with course 5-6 to complete ten hours' science.

*B. Courses Open to Graduates and Undergraduates.*

- 5-6. ELEMENTARY STUDY OF MINERALS AND ROCKS. *Both semesters. T. Th. 9:00-11:00. 2 h. each semester. Open to all who have not had college geology or mineralogy.*

This course may be taken with courses 3-4 to complete ten hours' science.

- 7-8. ECONOMIC GEOLOGY. *Both semesters. M. Tu. W. Th. F. 11:30, with two hours additional laboratory work per week, arranged to suit convenience of students. 5 h. each semester. Engineering students meet with the regular class M. W. F. Credit 3 h.*

A study of the mineral resources of the United States, including:

a. The non-metallic products; fuels—coal, petroleum, gas; building and structural materials—stone, marble, slate, clay, cement, etc.; miscellaneous products—phosphates, mineral paints, mineral waters, salt, borax, etc.

b. The metal-bearing minerals; the origin and formation of ore-bodies; the ores of iron, copper, lead, zinc, gold, silver, etc.; the extraction and use of the metals.

c. Soils—their nature and origin.

- 9-10. MINERALOGY. DESCRIPTIVE AND DETERMINATIVE. *Both semesters. Lectures and recitations Tu. Th. 8:00; laboratory, M. W. F. 8:00 to 10:00. 3 hours' laboratory work to be arranged. 5 h. each semester.*

The course will include elementary crystallography, the determination of unknown minerals by physical and chemical tests, and the descriptive study of collections of typical minerals.

Prerequisite: inorganic chemistry, including simple qualitative analysis.

11. QUANTITATIVE MINERALOGY. *Second semester. Laboratory M. W. 1:30-4:30; recitations F. 1:30. 3 h.*

The course will include the quantitative determination of various economic minerals, with special reference to gold and silver.

Prerequisites: gravimetric quantitative analysis, and mineralogy course 9-10, but may be taken with course 10.

12. GEOLOGY OF COLORADO. *First semester. Daily. 10:00. 5 h.*

A study of the dynamic, historical and economic geology of the

State. May be continued as a two-hour course in second semester.

Should be preceded by a course in general geology.

13. GEOLOGICAL MATERIALS FOR INDUSTRIAL CHEMISTRY. *Second semester. M. W. F. 10:00. 3 h.*

A study of the occurrence, properties and uses of geological products of economic value in chemical industries.

Prerequisite: a year in general chemistry.

- 14-15. ADVANCED FIELD GEOLOGY. *Both semesters. First semester. M. W. F. 1:30 to 4:30. Second semester to be arranged. 3 h. each semester.*

The course is designed to train the student in all kinds of geological field work. The methods used are those employed by the U. S. Geological Survey.

Prerequisite: superior work in courses 1 and 2. Registration only after consultation with the Department of Geology.

- 16-17. PALEONTOLOGY. *Both semesters. 3 h. each semester. The course is open to advanced students in geology and biology, on consultation with the professor.*

It will include lectures on the principles of paleontology, and the facts concerning the development of types which characterize the several periods of geologic time; laboratory work in the identification, classification and description of fossil animals and plants, and the discussion of their stratigraphic and biologic position and significance.

- 18-19. PETROGRAPHY. *Both semesters. One single and two double periods per week. Hours will be arranged.*

The mineral and chemical composition of rocks, their occurrence, origin, structural features and classification, and a detailed study of the more important rock families. The study of rock sections with the microscope will form an important part of the course.

Prerequisites: courses 1, 2, 7, and 8, or equivalent work.

For courses for graduates only, see page 152.

## PHILOSOPHY

1. HISTORY OF PHILOSOPHY. *First and second semesters. Tu. Th. 11:30. 2 h. Open to all.*

Course covers two years and may be begun in any semester. 1911.

2. INTRODUCTION TO PHILOSOPHY. *First and second semesters. M. W. F. 11:30. 3 h. Open to all above rank of freshman. 1911.*
3. ETHICS. *First semester. Tu. Th. 10:00. 2 h. Open to all who have taken 1, 2, or 6. 1911.*
- \*4. LOGIC. *Second semester. 3 h. Open to all. Hours to be arranged. 1912.*
- \*5. HISTORY OF ESTHETICS. *First semester. 2 h. Open to all. Hours to be arranged. 1911.*
- \*6. HISTORY OF ETHICS. *First semester. 2 h. Open to all. Hours to be arranged. 1911.*
7. ESTHETICS. *Second semester. Tu. Th. 10:00. 2 h. Open to all who have taken 1, 2, or 5. 1912.*
8. HISTORY AND PHILOSOPHY OF EDUCATION. *First and second semesters. 1911-1912. M. W. F. 10:00. 3 h. Open to all.*
9. METAPHYSICAL SEMINAR. *First and second semesters. Tu. 7:00-9:00 p. m. 2 h. For advanced students. 1911.*

It is now possible to make more than 30 hours of Philosophy in one year; and 40 hours in all. Only "A" students are advised to enter the course in Metaphysics for credits. Beginners are advised to take courses 1 and 2 in the Sophomore year; but freshmen may take course 1. Courses 1 and 2 and a course in general psychology, are required for serious work.

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\* Courses offered by Assistant.

## PSYCHOLOGY

1. GENERAL PSYCHOLOGY. (EDUCATION 1). *First semester. M. W. F. Section I, 1:30; Section II, 2:30; with an additional hour to be arranged for recitations and conferences. 3 h.*

This course gives, by means of lectures, recitations, experiments, and demonstrations, a general survey of the essential facts and fundamental laws of mind. It is prerequisite to all other courses in psychology and to the courses in education. The student who expects to make psychology or education a major should take this course in his sophomore year.

2. COMPARATIVE PSYCHOLOGY. (EDUCATION 2.) *Second semester.*  
M. W. F. 2:30. 3 h.

Continuation of course 1.

A systematic study of mental development in the race and in the individual. The course will sketch the development of the nervous impulse, of animal sense organs with reference to their habits, of instincts and intelligence in animals, and in cases of arrested development. With these simpler facts as a basis the development of mental functions in the individual in childhood and adolescence will be discussed with reference to educational theory.

3. ADVANCED PSYCHOLOGY. *First semester.* Tu. Th. 9:00. 2 h.  
*Open on consultation.*

Lectures, discussions, readings, and a thesis. An intensive study of selected problems; introspective exercises and an analytic study of mental phenomena.

Prerequisite: Psychology 1, or its equivalent.

4. PATHOLOGICAL PSYCHOLOGY. *Second semester.* Tu. Th. 9:00.  
2 h. *Open on consultation.*

Lectures, readings, and a thesis.

Disorders of sensation, memory, imagination, association, the emotions and volition. As course 2 traces the rhythms of development of mental functions this course will discuss the order of their impairment. Mental hygiene and a study of such psychoses as throw light on the general and genetic problems of psychology.

- 5-6. EXPERIMENTAL PSYCHOLOGY. *Throughout the year.* Tu. Th.  
Two laboratory periods 1:30-3:30, and one lecture period,  
3:30. 3 h.

This course gives an introduction to experimental psychology and aims to familiarize the student with modern psychological methods, apparatus, and results.

*First semester.* Typical experiments and demonstrations in the psychology of the senses, feeling and movement, with a study of individual differences.

*Second semester.* Experiments in perception and the higher mental processes; time, intensity and extensity of mental phenomena; mental and physical tests and measurements; statistical methods.



7. EDUCATIONAL PSYCHOLOGY. (EDUCATION 2.) *Second semester.*  
*M. W. F. 1:30. 3 h.*

Lectures, readings, and a thesis.

The principles of psychology and the results of experimental pedagogy which are modifying the course of study and methods of instruction in the older schools of this country will be presented in this course. It is recommended that those students who are primarily interested in education take this course as a continuation of course 1.

Prerequisite: Psychology 1, or its equivalent.

8. SOCIAL PSYCHOLOGY. (EDUCATION 11). *First semester. 2 h.*

A discussion of the laws and hypotheses of mind within the social group; the contagion of ideas, emotions, and conduct; the individual as a social product; human occupations; educational implications.

Prerequisites: Psychology 1 and 7, or their equivalents.

9. CHILD STUDY. (EDUCATION 13). *First semester. 2 h.*

A systematic study of the physical and mental development of children; a discussion of the facts, scientifically determined, of the psychology of childhood and adolescence, with their educational applications.

Prerequisite: Psychology 7, or its equivalent.

10. SEMINAR IN PSYCHOLOGY. *Throughout the year. Th. 7:30-9:30.*  
*2 h. For graduates and advanced undergraduates.*

This course will vary from year to year, being adjusted to the needs and interests of members. Systematic study of special questions in psychological theory, with discussion of new solutions; advanced work and independent investigations and research in special problems.

For courses for graduates only, see page 153.

## EDUCATION

1. GENERAL PSYCHOLOGY. (PSYCHOLOGY 1) *First semester. M. W. F. Section I, 1:30; section II, 2:30; with an additional hour to be arranged for recitations and conferences. 3 h.*

This course gives, by means of lectures, recitations, experiments and demonstrations, a general survey of the essential facts and fundamental laws of mind. It is prerequisite to all



other courses in psychology and to the courses in education. The student who expects to make psychology or education a major should take this course in his sophomore year.

2. EDUCATIONAL PSYCHOLOGY. (PSYCHOLOGY 7). *Second semester.*

M. W. F. 1:30. 3 h.

Lectures, readings and a thesis.

The principles of psychology and the results of experimental pedagogy which are modifying the course of study and methods of instruction in the older schools of this country will be presented in this course. It is recommended that the student who is primarily interested in education take this course as a continuation of course 1.

Prerequisite: Education 1, or its equivalent.

3. PRINCIPLES OF EDUCATION. *First semester.* 3 h.

An examination of those facts and hypotheses which have significance for educational theory. Biological, physiological, anthropological, psychological, sociological, and philosophical data will be considered to the end of deciding upon working hypotheses for educational practice.

Prerequisite: Education 1 and 2, or their equivalents.

4. ELEMENTARY SCHOOLS. *Second semester.* 3 h.

The history of these institutions; curricula; aims and organization; practices; merits; failures; means of improvement; opportunities; special attention to Colorado elementary school system and Colorado school law.

Prerequisite: Education 3, or its equivalent.

5. SECONDARY SCHOOLS. *Second semester.* 3 h.

The history of the secondary school; curricula; aims and organization; practices; merits; failures; opportunities; the adolescent; comparative study of secondary schools; the Colorado system and Colorado school law in this connection.

Prerequisite: Education 3, or its equivalent.

6. METHOD IN EDUCATION. *Either semester.* 2 h.

The application of theories in the realm of practice; the means of education—the art; close examination of general and special methods; relative values of methods; improvement in methods; the mechanics of instruction.

Prerequisite: Education 3 and 4 or 5, or their equivalents.

- 7-8. PRACTICE TEACHING AND CLASS-ROOM MANAGEMENT. *Either or both semesters.* 4 h.

Practice teaching is done in the public schools of Boulder, both elementary and secondary. The student teaches each day. The scheme is to separate from the regular classes a few who need instruction in a small group and under close supervision. The student attends each week a class in which the particular problems of class-room management are discussed.

9. HISTORY OF ANCIENT AND MEDIEVAL EDUCATION. *First semester.* M. W. F. 11:00. 3 h. *Open to all except freshmen.*

This course deals with the history of culture and civilization, of social and intellectual as well as of definite school influences in China, India, Persia, and other Asiatic countries, as well as in Greece and Rome. It also deals with primitive Christian and Mediæval education.

10. HISTORY OF MODERN EDUCATION. *Second semester.* M. W. F. 11:00. 3 h. *Open to all except freshmen.*

In this course it is necessary to confine the work more strictly to academic education. The course deals with all the great reform movements from the Revival of Learning to the present day.

11. SOCIAL PSYCHOLOGY. (PSYCHOLOGY 8). *First semester.* M. W. 2 h.

A discussion of the laws (and hypotheses) of mind within the social group; the contagion of ideas, emotions, and conduct; the individual as a social product; human occupations; educational implications.

Prerequisites: Education 1 and 2, or their equivalents.

12. EDUCATION AND SOCIETY. *Second semester.* M. W. 2 h.

A study of the interrelations of education and society; society's responsibilities to, and need of, the school; the school's duty to, and expectations of, society; educational institutions and forces other than the school; society an educational device.

Prerequisite: Education 1, 2 and 3.

13. CHILD STUDY. (PSYCHOLOGY 9). *First semester.* 2 h.

A systematic study of the physical and mental development of children; a discussion of the facts, scientifically determined, of the psychology of childhood and adolescence, with their educational applications.

Prerequisite: Education 2, or its equivalent.

14. COMPARATIVE STUDY OF SCHOOL SYSTEMS. *Second semester.* 2 h.  
A detailed comparative study of the school systems of Germany, France, England, and the United States as to ideals, organization, administration, methods, and efficiency.  
Prerequisites: Education 9 and 10.
15. ADVANCED PRACTICE TEACHING. *Either or both semesters.* 2-4 h.  
A study by observation and experiment of particular and advanced problems of instruction and supervision. It must be taken in connection with the Practicum in Education.  
Prerequisite: Education 7 or 8, and special permission.
16. CONTEMPORARY EDUCATIONAL PROBLEMS. *Second semester.* 2 h.  
An intensive study of topics only lightly touched upon in other courses or which present such difficulties as to require closer study: Means of securing teachers; moral education; education for American citizenship; education for defective classes; the education of immigrants; technical education. When possible, experts along the various lines will be called in to lecture.  
Prerequisites: Education 1, 2, 3 and 11 or 13.
17. PHILOSOPHY OF EDUCATION. *Both semesters.* 2 h.  
This course will consider philosophy as a basis of educational theory. The influence of the following philosophers and their systems upon educational theory and practice will be taken up somewhat in detail: Plato, Aristotle, Descartes, Leibnitz, Locke, Kant, Hegel, Spencer. The course presupposes preparation both in the history of philosophy and the history of education.
18. PRACTICUM IN EDUCATION. *Throughout the year.* 1 or 2 h.  
The subject-matter of this course will vary from year to year. It will take up for special examination and investigation selected problems of importance in educational theory and practice. Provision will be made for independent investigations and for research in special problems. It will do the work of a journal club by devoting some time to current educational literature, events, contemporary educators, articles, books, educational news, and experiments.

## HISTORY

1. GENERAL EUROPE. 376-1815. *Throughout the year.* M. W. F.  
2:30. 3 h.  
Lectures, text-book and collateral readings.

A survey of the history of the western European nations from the invasions of the Germans to the Congress of Vienna. The first semester will end at the year 1300.

2. EUROPE IN THE NINETEENTH CENTURY. *Throughout the year.* 3 h.  
Lectures and collateral readings.

Intended to supplement course 1 by a more detailed study of nineteenth century history. After a brief outline of the institutions and ideals of the Revolutionary and Napoleonic period, the course will deal with the development of the principal nations of modern Europe. Not given in 1911-1912.

Prerequisite: course 1.

3. AMERICAN HISTORY. 1760-1870. *Throughout the year.* M. W. F.  
3 h. *Not open to freshmen.*

Lectures, text-book, and collateral readings.

The political history of the United States from the period of the Revolution through the Civil War. The introductory course in United States History.

4. ROMAN HISTORY FROM THE BEGINNINGS TO A. D. 476. *First semester.* M. W. F. 9:00. 3 h.

Special emphasis will be placed on: the rise, development and expansion of Rome; the political, social, and economic institutions of the Republic and of the Empire; the decline of the Empire; and the influence of Roman history and institutions on mediæval and modern times.

Prerequisite: course 1.

5. THE FRENCH REVOLUTION AND THE NAPOLEONIC ERA. *Second semester.* M. W. F. 9:00. 3 h.

An intensive study of the causes, events, and institutions of the French Revolution and the Napoleonic Era, with a consideration of the permanent influences of the period on France and other countries.

Prerequisite: course 1.

6. ENGLISH CONSTITUTIONAL HISTORY. *Throughout the year.* Tu.  
Th. 11:30. 2 h.

For this course given in the Law School credit will be given to students of the College of Liberal Arts.

Prerequisite: course 1.

7. THE COLONIAL EXPANSION OF ENGLAND. *Throughout the year.*  
Tu. Th. 10:00. 2 h.

A study of England's colonial policy and expansion from the sixteenth century to the present day. The major part of the course will be devoted to the problems and government of the colonies in the nineteenth century. Not given in 1911-1912.

Prerequisite: course 1.

8. GERMAN HISTORY FROM THE BEGINNINGS TO THE PRESENT TIME.

*Throughout the year. Tu. Th. 11:30. 2 h.*

Special stress will be laid on the cultural influence of Germany, the nature and workings of the present German Empire, and the political and economic influences of Germany as a world power.

9. MODERN ENGLAND. *First semester. 2 h.*

A detailed study of selected problems in the history of England since 1832.

Prerequisite: two years of history.

10. HISTORICAL BIBLIOGRAPHY. *Second semester. 2 h.*

A course designed to acquaint students majoring in history with the various bibliographical aids. Exercises in the use of bibliographies and historical magazines.

Required of all Junior and Senior students majoring in history.

Prerequisite: two years of history.

11. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES. *Throughout the year. 2 h.*

A history of the settlement of the Continent. The life of the people, and the development of natural resources. Particular attention will be paid to the evolution of the means of transportation, the rise of industries, improvements in agriculture, reclamation of the West, and like topics. Not given in 1911-1912.

Prerequisite: course 3.

12. AMERICAN COLONIAL HISTORY. *First semester. 2 h.*

A brief outline narrative of the establishment of the thirteen colonies, and their political and social development to the period of the Revolution. Emphasis will be laid on the European inheritance of the colonists, and their development of American institutions in the new environment. Not given in 1911-1912.

Prerequisite: course 3.

13. CIVIL WAR AND RECONSTRUCTION. *Second semester. 2 h.*

A study of the political and economic causes of the war, the events of the struggle, and of the subsequent reconstruction, both



political and constitutional, consequent upon its outcome. Not given in 1911-1912.

Prerequisite: course 3.

14. THE MEDIÆVAL CHURCH AND THE REFORMATION. *Throughout the year.* 3 h.

Lectures and reports.

A study of the life and the institutions of the Church from its origin through the period of the Reformation. The early organization of the Church and the persecutions, the rise of the Papacy and the greater monastic orders, the mediæval heresies and attempts at internal reform, and the culmination of the later mediæval struggles in the rise of the new churches of the sixteenth and seventeenth centuries. Not given in 1911-1912.

Prerequisite: two years of history.

15. ENGLISH SOCIAL AND INDUSTRIAL HISTORY. *Throughout the year.* 2 h.

Not given in 1910-1911.

For courses for graduates only, see page 153.

### ECONOMICS AND SOCIOLOGY

1. DEVELOPMENT OF INDUSTRIAL SOCIETY. *First semester.* M. W. F. 2:30. 3 h.

The aim of this course is to give an outline of English industrial development from the twelfth century to the present, in order to show the genesis of modern industrial customs and rights. The course is designed to be introductory to all courses in economics.

2. ECONOMIC HISTORY OF THE UNITED STATES. *Second semester.* M. W. F. 2:30. 3 h.

Lectures, reading, discussions.

3. GENERAL PRINCIPLES OF ECONOMICS. *First semester.* M. W. F. 10:00. 3 h.

Lectures, reading, discussions.

This course, or its equivalent, is prerequisite to all other courses in Economics, except course 1.

*For Graduates and Undergraduates.*

4. ADVERTISING. *Second semester.* Tu. Th. 9:00. 2 h.

Must be preceded by Principles of Economics, and Psychology.



5. PRINCIPLES OF SOCIOLOGY. *First semester. M. W. F. 2:30. 3 h.*  
Lectures, reading, discussions.

This course aims to present a brief outline of sociological thought; a discussion of the elements of association underlying social relations and institutions; the results of race, group and individual competition; the conditions of progress; some of the chief problems of Sociology—population, degeneration, pauperism, the dependent classes, crime, immigration, divorce, great cities, education.

Students are strongly advised not to elect this course until the senior year.

6. SPECIAL PROBLEMS IN SOCIOLOGY. *Second semester. M. W. F. 2:30. 3 h.*

Reading, reports, discussions, with occasional lectures.  
Must be preceded by Principles of Sociology.

7. THE THEORY AND APPLICATION OF STATISTICS. *First semester. 2 h.*

This course aims to present the subject of statistics as an instrument of research. It is designed for all students of social and economic problems.

8. NATIONAL ADMINISTRATION. *First semester. Tu. Th. 2 h.*  
A study of the United States government in action.

9. STATE AND LOCAL GOVERNMENT. *Second semester. Tu. Th. 8:00. 2 h.*

Comparative studies of the governmental institutions of the various states.

10. POLITICS. *Second semester. M. W. F. 11:30. 3 h.*

Comparative studies of the governments of the United States and leading European countries; political machinery.

11. POLITICAL PARTIES AND PARTY PROBLEMS. *First semester. M. W. F. 2:30. 3 h.*

This course deals with the organization of political parties, with party machinery, and with such current party problems as direct primaries, proportional representation, the initiative, referendum, recall, civil service, corrupt practices acts, and methods of financing political parties.

12. CITY GOVERNMENT IN THE UNITED STATES. *Second semester. M. W. 1:30. 2 h.*

13. CITY GOVERNMENT IN COLORADO. *Second semester. F. 1:30. 1 h.*

14. CONSULAR AND DIPLOMATIC SERVICE. *Second semester. Tu. Th.*  
2:30. 2 h.  
Designed primarily for those who desire to enter the foreign service of the United States.
15. HISTORY OF COMMERCE. *First semester. Tu. Th.* 2 h.  
A study of the development of the world's commerce with special attention to modern commercial organization.
16. ECONOMIC AND COMMERCIAL GEOGRAPHY. *First semester. Tu. Th.*  
8:00. 2 h.  
Studies in the world's production and distribution.
17. CURRENT ECONOMIC PROBLEMS. *Second semester. Tu. Th.* 10:00.  
2 h.  
Lectures, reading, discussions.  
This course deals with the chief elements in such topics as the currency, money and banking, free trade and protection, the railway problem, taxation, the relation of the state to industrial action, trusts, and in general, such topics as may be of timely interest to students of economic science.
18. MONEY AND BANKING. *Second semester. M. W. F.* 8:00. 3 h.  
Lectures, reading reports.
19. TRANSPORTATION. *Second semester. M. W. F.* 3 h.  
Studies in railroad management, finance, rates, and government ownership.  
Must be preceded by Principles of Economics.
20. CORPORATION FINANCE. *Second semester.* 2 h.  
A study of the methods of organizing and financing large industrial companies.
21. TAXATION. *First and second semester.* 2 h.  
A study of the revenue systems in the United States and foreign countries.
22. THEORY OF INVESTMENTS (LIFE INSURANCE, ETC.) *First semester.*  
2 h.  
Given in Department of Mathematics.
23. THEORY AND PRACTICE OF ACCOUNTING. 3 h.  
Given in Department of Mathematics.

For courses for graduates only, see page 155.

## MUSIC

1. HARMONY. *First year. Each semester. M. W. F. 11:30. 3 h.*
2. HARMONY. *Second year. Each semester. Tu. Th. 11:30. 2 h.*
3. COUNTERPOINT. *Each semester. Tu. Th. 10:00. 2 h. Open only to students who have completed course 2.*
4. CANON AND FUGUE. *Each semester. 1 h. Open only to students who have completed courses 2 and 3.*
5. COMPOSITION AND ORCHESTRATION. *Each semester. 1 h. Open only to students who have completed course 2.*

Students in this course are advised to take in connection with it course 3 unless this work has already been done.

6. HISTORY OF MUSIC. *Each semester. Tu. 3:30. 1 h. Open to all.*  
Lecture course, including lectures on Musical Æsthetics and Musical Analysis.
7. LECTURES ON MUSIC.

In addition to the above regular course, occasional lectures on the Opera, the Modern Music-Drama, and other musical subjects are given by the Professor of Music.

8. ÆSTHETICS AND PHILOSOPHY OF MUSIC. *Either semester. 1 h.*  
Primarily for graduates and advanced students.

NOTE—For musical organizations, see page 48.

## ELECTIVES IN THE PROFESSIONAL SCHOOLS

In accordance with the general plan outlined on page 72, the courses tabulated below may be elected in the professional schools.

## COLLEGE OF ENGINEERING.

The following subjects in the College of Engineering may be taken by all students in the College of Liberal Arts:

Drawing, 6; Descriptive Geometry, 3; Surveying, 8; Least Squares, 2; Applied Mechanics, 4; Graphic Statics, 3; Kinematics, 2; Hydraulics, 3; Thermodynamics, 2; Dynamo Electric Machinery, 4.

## SCHOOL OF LAW.

Students in the College of Liberal Arts in their fourth year who declare their intention of proceeding to the degree LL.B. in the Uni-

versity of Colorado, may be allowed credit for twenty-two hours on the completion of all work required in the freshman year of the School of Law.

SCHOOL OF MEDICINE.

The two degrees of M.D. and B.A. may be conferred on the completion of six years' work, two years' credit (60 hours) being allowed on the completion of the full freshman and sophomore work in the Medical School. A student may also receive the B. A. degree on the completion of three years in the College and one full year (30 hours) in the Medical School.

# COLLEGE OF COMMERCE

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## FACULTY

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JOHN B. PHILLIPS, Ph.D.,  
Secretary of the College of Commerce.

The faculty of the College of Commerce consists of professors and instructors whose work contributes to the courses.

## ANNOUNCEMENT

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The College of Commerce was opened September, 1906. Its purpose is to provide professional training for the practical demands of business. It aims to prepare men for careers in Domestic and Foreign Commerce and Banking, Insurance, Transportation, Trade and Industry, Journalism, and in branches of the Public Service, like the Consular, in which a knowledge of business is essential. Heretofore universities and colleges have done all they could for the young man who wished to become a minister, teacher, lawyer, physician, journalist, or engineer. The College of Commerce is developed in response to the demands of (1) enlarged commercial operations, (2) the public service, (3) the desire of parents to give their sons a college education and at the same time prepare them for their life work in business.

It is well known that the knowledge of the details of any particular line of business can be acquired only by actual experience. But the broad training given students in this department of the University will enable them to acquire the routine technicalities of any concern more easily than those whose minds have not been made flexible and acute by systematic training. They will thus the more readily assume positions of leadership and responsibility in the business world.

The curriculum of the College of Commerce is prepared with the following aims in view: (1) To furnish a certain amount of culture work which is the mark of college training. (2) To familiarize the student with the nature and workings of the industrial organism. This is attempted by studies in commercial geography, economics and history of commerce, transportation, banking, business organization and management. (3) To impart a certain amount of knowledge of the physical and chemical sciences and their applications to the industrial arts. (4) To give an acquaintance with the articles of commerce and the various industrial processes through which they pass. (5) To make the student acquainted with the principles of



commercial law. (6) To supply an equipment in modern languages. (7) To afford an opportunity to acquire some knowledge of a particular line of trade.

The work of the College of Commerce is on the same high plane as that of the other undergraduate departments of the University. The entrance requirements are the same and an equal number of hours' work is required for the Bachelor's degree.

ORGANIZATION

The College of Commerce offers four courses: 1. Banking. 2. Manufactures. 3. Journalism. 4. Trade, Transportation, and Consular Service.

REQUIREMENTS FOR ADMISSION

The requirements for admission are the same as for the College of Liberal Arts. See page 55.

\*SUBJECTS IN THE COLLEGE OF COMMERCE

(REQUIRED FOR GRADUATION.)

FRESHMAN YEAR

|                                       | I.<br>Banking | II.<br>Mfrs. | III.<br>Jour. | IV.<br>Trade, Etc. |
|---------------------------------------|---------------|--------------|---------------|--------------------|
| 1. ENGLISH LANGUAGE.                  | 6             | 6            | 6             | 6                  |
| 2. SCIENCE .....                      | 10 (Chem.)    | 10           | 10 (Chem.)    | 10                 |
| 3. HISTORY .....                      | 6             | 6            | 6             | 6                  |
| 4. FRENCH, GERMAN OR<br>SPANISH ..... | 10            | 10 (French)  | 10            | 10                 |
|                                       | 32            | 32           | 32            | 32                 |

SOPHOMORE YEAR

|                                           |            |                          |                                    |    |
|-------------------------------------------|------------|--------------------------|------------------------------------|----|
| 5. ENGLISH LANGUAGE<br>OR HIST. ENG. LIT. | 4          | 4                        | 4                                  | 4  |
| 6. MATH., SCIENCE....                     | (Math.) 10 | (Math.) 10<br>(Chem.) 10 | (Econ.<br>Geol.,<br>Econ,<br>Bot.) | 10 |
| 7. HISTORY OR ECONOMICS .....             | 6          | (Hist.) 6<br>(Econ.) 10  | 10                                 | 6  |
| 8-9. FREE ELECTIVES...                    | 10         | 6                        | 10                                 | 10 |
|                                           | 30         | 30                       | 30                                 | 30 |

\*In addition to regular courses in the departments open to election, provision will be made for lectures on current problems and practical topics by prominent business men.

## JUNIOR AND SENIOR YEARS

|                                           |                  |                  |                  |                  |
|-------------------------------------------|------------------|------------------|------------------|------------------|
| LAW .....                                 | † { 10 }<br>20 } | † { 10 }<br>10 } | 10               | † { 10 }<br>20 } |
| ECONOMICS .....                           | —                | —                | —                | —                |
| ECON. GEOL., ECON. BOT.,<br>PHYSICS ..... | —                | { 10 }           | —                | —                |
| ENGLISH LANG. AND LIT.                    | —                | —                | † { 20 }<br>10 } | —                |
| CLASSICS (in Eng.)...                     | —                | —                | 18               | —                |
| FREE ELECTIVES .....                      | 28               | 28               | 18               | 28               |
|                                           | 58               | 58               | 58               | 58               |

The following courses are especially recommended for students in the College of Commerce:

Advertising.

History of Commerce.

Commercial Geography.

Economic History of the United States.

Taxation.

Transportation.

Corporation Finance.

Money and Banking.

Journalism.

Diplomatic and Consular Service.

Theory and Practice of Accounting.

Life Insurance.

For a further description of these courses, see Departments of Mathematics, and Economics and Sociology in College of Liberal Arts.

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† The brackets indicate the equivalent of the thirty hours of group electives required in the junior and senior years of the College of Liberal Arts. If subjects in the first two years, also characteristic of each of the four courses, are added, the sum is fifty hours for each group.

# COLLEGE OF EDUCATION

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## FACULTY

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FRANK E. THOMPSON, B.A.,  
Secretary of the Faculty of the College of Education.

The Faculty of the College of Education consists of Professors and Instructors in the College of Liberal Arts whose work contributes to the various courses.

# GENERAL STATEMENT

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## ORGANIZATION

A College of Education, to be a division of the College of Liberal Arts, was authorized by the Board of Regents in January, 1908. The report of the committee on a course of study was adopted in April, and the College was regularly opened for work in September of that year.

## FUNCTION

It is intended that this College shall provide systematic and comprehensive training for those who may choose education as a *profession*. That there may be such a profession becomes every year more apparent, and it becomes apparent, too, that preparation for service in it must be as complete as for service in other professions. No human endeavor is more important than education; no class should be more carefully prepared than teachers. The need of the present time, expressed in most quarters in a demand, is that many of the teachers in the elementary schools, all of the teachers in the high schools, and all persons engaged in supervision of instruction shall have as a minimum of scholarship the B.Á. degree, or its equivalent, and shall have made intensive study of the history, theory, and practice of education. There is need, then, in each state for at least one professional school of collegiate rank which shall afford opportunity for training, both in theory and practice, for teaching, supervisory and administrative positions in elementary, secondary and normal schools.

The College of Education is designed to satisfy this need; it is a device of organization and administration to secure for the teacher studies along pertinent lines and in right proportions and sequence. The student looking toward teaching as a profession will be assisted and directed in the choice and prosecution of his work from the time of his matriculation until his graduation. He will not sacrifice anything of the culture of the Liberal Arts course, but through all the four years he will be growing toward efficiency and in professional spirit.

## DESIGN OF CURRICULUM

The curriculum is designed to furnish to the prospective teacher who would be a leader in educational thought and thoroughly equipped for his work:

1. Courses calculated to give a broad acquaintance with knowledge and that culture rightly expected of the college graduate.
2. Courses in the subjects he expects to teach, of such character and so organized in sequence that when graduated he will be in some measure an authority in these subjects.
3. Courses that will give knowledge of:
  - a. The constitution and needs of society.
  - b. Child and adult natures and their possibilities for modification.
  - c. The educational values of the various school subjects.
  - d. The art of instruction—this knowledge to be both general and concrete and to come in large measure from actual practice in teaching.
  - e. Educational history and its significance, both for the present and the future.

## THE UNIVERSITY AND THE TRAINING OF TEACHERS

Inasmuch as education, in the professional sense, is service in an exceedingly complex field, the training required cannot be adequately given except in institutions of at least collegiate grade, nor in less time than that required for a college course. It is therefore peculiarly fitting that a College of Education should be organized in connection with, and largely out of the facilities of, the College of Liberal Arts in the University. Here are found the most complete equipment for securing the requisite scholarship, the best atmosphere for the development of scientific power and professional spirit, as well as the most highly selected students with whom to work.

College atmosphere gives a breadth of culture and has in it a suggestion of leadership which is to be found nowhere else. This has come to be so well recognized that for the high-school teacher in particular a college training is demanded in practically all sections. This was shown by the Report of the Committee of Fifteen, as early as 1895, later by the Standards for Accrediting of the North Central

and other Associations of Colleges and Secondary Schools, and recently in an emphatic way in the joint recommendations of the Committee of Seventeen on the Professional Preparation of High-School Teachers. In addition to this minimum requirement for academic preparation the same associations are insisting upon both general and special pedagogical training of a standard given only in university departments.

From the standpoint of the University, the training of educators is one of its most important means of service. Regarding the essential services of a university to the commonwealth as the scientific investigation of the people's problems, the training of certain persons for the professions, the bringing out of leaders, and the setting of culture standards, it is at once apparent that there is no more logical channel, especially for state university endeavor, than this training of expert educators. Teaching is one of the community's most important activities, and a rapidly growing body, both lay and professional, is expecting the same effectiveness in results as is achieved in other fields. The university can make no mistake in training these leaders, and the student can make no mistake in taking such training.

### ADMISSION TO THE COLLEGE OF EDUCATION

1. **REGULAR STANDING.**—The requirements for admission to regular standing in the College of Education are the same as for the College of Liberal Arts. See page 55.

2. **ADVANCED STANDING.**—Students from universities, colleges, technical and teachers' training schools, who have been admitted to such institutions from a full four-year high-school course, will be admitted to such advanced standing as may be agreed upon by a committee composed of the Dean of the College of Liberal Arts, the Secretary of the College of Education, and the heads of departments in which advanced standing is desired.

3. **IRREGULAR STANDING.**—Persons who are 21 or more years of age and who give evidence of fitness to pursue particular studies may be admitted as special students without examination. Such special students may be graduated by fulfilling all requirements, both for admission and graduation.



COURSES OF STUDY LEADING TO THE DEGREE BACHELOR  
OF ARTS AND A BACHELOR'S DIPLOMA  
IN EDUCATION

The course of study of the College of Education covers a period of four years, 120 hours of credit being required for graduation. Graduates receive the degree of Bachelor of Arts and a Bachelor's Diploma in Education, which latter is a certificate of proficiency in the theory and art of education.

Attention is called to the following regulations:

1. All students must take fifty hours in some scheduled group; of these fifty hours they must take at least thirty in the Junior and Senior years.
2. A student may be allowed to substitute four hours of Literature for the required Composition of the Sophomore year, on recommendation of the head of the Department, if he attains a satisfactory grade in the English Composition of the Freshman year.
3. Students taking ten hours of either classics, mathematics, or science in the Freshman year, must choose five hours in one of the other groups named, in the Sophomore year.
4. The selection of the major subject should be made and signified to the Secretary of the College of Education not later than the beginning of the Sophomore year.
5. The general regulations of the College of Liberal Arts apply in the College of Education.

The course of study of the College of Education is distributed as follows:

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| English Language (may include 4 hours of Literature)                       | 10 hours |
| Classics and Mathematics, Mathematics and Science, or Science and Classics | 15 hours |
| History or Economics                                                       | 6 hours  |
| Psychology (General and Educational)                                       | 6 hours  |
| History of Education                                                       | 6 hours  |
| Science and Principles of Education                                        | 3 hours  |
| Elementary Schools or Secondary Schools                                    | 3 hours  |
| Method in Education                                                        | 2 hours  |

|                                                                                    |          |
|------------------------------------------------------------------------------------|----------|
| Practice Teaching.....                                                             | 4 hours  |
| Philosophy or Sociology or additional Education or Psychology.....                 | 6 hours  |
| Group Electives, "Major" and "Minors" (subjects the student expects to teach)..... | 50 hours |

## PREFERRED SCHEDULE

## FRESHMAN YEAR

|                                          |          |
|------------------------------------------|----------|
| 1. ENGLISH LANGUAGE.....                 | 6        |
| 2. CLASSICS, MATHEMATICS OR SCIENCE..... | 10       |
| 3. HISTORY OR ECONOMICS.....             | 6        |
| 4. GROUP OR FREE ELECTIVES.....          | 8        |
|                                          | <hr/> 30 |

## SOPHOMORE YEAR

|                                          |          |
|------------------------------------------|----------|
| 5. ENGLISH (OR LITERATURE).....          | 4        |
| 6. CLASSICS, MATHEMATICS OR SCIENCE..... | 5        |
| 7. a. PSYCHOLOGY .....                   | 6        |
| b. HISTORY OF EDUCATION.....             | 6        |
| 8-9. GROUP OR FREE ELECTIVES.....        | 9        |
|                                          | <hr/> 30 |

## JUNIOR YEAR

|                                                                                         |          |
|-----------------------------------------------------------------------------------------|----------|
| SCIENCE AND PRINCIPLES OF EDUCATION, AND EITHER<br>ELEMENTARY OR SECONDARY SCHOOLS..... | 6        |
| ELECTIVES (In Education Group).....                                                     | 3-6      |
| 10. GROUP ELECTIVES (Subjects Student Intends to<br>Teach) .....                        | 20-15    |
| 11. FREE ELECTIVES.....                                                                 | 6-3      |
|                                                                                         | <hr/> 30 |

## SENIOR YEAR

|                                                                  |          |
|------------------------------------------------------------------|----------|
| METHOD IN EDUCATION.....                                         | 2        |
| PRACTICE TEACHING.....                                           | 4        |
| ELECTIVES (In Education Group).....                              | 0-3      |
| 12. GROUP ELECTIVES (Subjects Student Intends to<br>Teach) ..... | 20-15    |
| 13. FREE ELECTIVES.....                                          | 9-6      |
|                                                                  | <hr/> 30 |

## SUGGESTED GROUPS OF MAJORS AND MINORS

The purpose of the group elective requirement is to secure on the part of the teacher a thorough and systematic knowledge of the subject or subjects he proposes to teach. Usually the teacher in the secondary school is required to teach two or more subjects. Hence it is desirable that he should have a careful and extensive preparation in one subject and sufficient preparation for teaching at least the elementary steps of two or three additional subjects. The following groups of majors and minors are uniform with those of the College of Liberal Arts:

## I. DIVISION OF LETTERS

|                                                                           |                                                           |
|---------------------------------------------------------------------------|-----------------------------------------------------------|
| GROUP (a) <i>Major</i> , Latin;                                           | <i>Minors</i> , { Greek,<br>European History.             |
| GROUP (b) <i>Major</i> , Greek;                                           | <i>Minors</i> , { Latin,<br>English Literature.           |
| GROUP (c) <i>Major</i> , German;                                          | <i>Minors</i> , { French,<br>History.                     |
| GROUP (d) <i>Major</i> , { Romance<br>Languages;                          | <i>Minors</i> , { Latin,<br>German.                       |
| GROUP (e) <i>Major</i> , { Compara-<br>tive and<br>English<br>Literature; | <i>Minors</i> , { History,<br>English Language.           |
| GROUP (f) <i>Major</i> , { English<br>Language;                           | <i>Minors</i> , { English Literature,<br>English History. |

## II. DIVISION OF SCIENCES

|                                       |                                              |
|---------------------------------------|----------------------------------------------|
| GROUP (g) <i>Major</i> , Mathematics; | <i>Minors</i> , { Physics,<br>Astronomy.     |
| GROUP (h) <i>Major</i> , Chemistry;   | <i>Minors</i> , { Physics,<br>Mathematics.   |
| GROUP (i) <i>Major</i> , Physics;     | <i>Minors</i> , { Mathematics,<br>Chemistry. |
| GROUP (j) <i>Major</i> , Botany;      | <i>Minors</i> , { Zoology,<br>Chemistry.     |
| GROUP (k) <i>Major</i> , Zoology;     | <i>Minors</i> , { Botany,<br>Chemistry.      |
| GROUP (l) <i>Major</i> , Geology;     | <i>Minor</i> , Chemistry.                    |
| GROUP (m) <i>Major</i> , Mineralogy;  | <i>Minors</i> , { Geology,<br>Chemistry.     |

## III. DIVISION OF PHILOSOPHY

|                                      |                                           |
|--------------------------------------|-------------------------------------------|
| GROUP (n) <i>Major</i> , Philosophy; | <i>Minors</i> , { Psychology,<br>Biology. |
| GROUP (o) <i>Major</i> , Psychology; | <i>Minors</i> , { Philosophy,<br>Biology. |
| GROUP (p) <i>Major</i> , Education;  | <i>Minors</i> , { Psychology,<br>Biology. |

## IV. DIVISION OF HISTORY AND ECONOMICS

|                                                           |                                               |
|-----------------------------------------------------------|-----------------------------------------------|
| GROUP (q) <i>Major</i> , History;                         | <i>Minors</i> , { Economics and<br>Sociology. |
| GROUP (r) <i>Major</i> , { Economics<br>and<br>Sociology; | <i>Minor</i> , History.                       |

## PRACTICE TEACHING

With the co-operation of the Board of Education of Boulder there has been worked out a very satisfactory scheme for the practice teaching. Certain classes in the elementary schools and in the high school are divided by the superintendent into sections, and one section of each such division is given into the charge of a student teacher who is under the immediate supervision of the regular class teacher, the school principal, and some one from the College of Education, and under the general supervision of the head of that institution. The section of the class taken by the student teacher is as a rule the smaller section and is composed of those who have had difficulty in getting on—of those who, except for this arrangement, would be likely to fail of passing. Each student in such a section is to some extent a subject for special study and treatment, hence the novice teacher's attention is forced at once where it properly should be: upon the problem of how children learn rather than upon how teachers teach.

Each such section is a problem, and a set of problems, to be solved by the persons mentioned working together. The student teacher observes the work of the regular class (in which his section frequently recites), sees what the ideal for the day's lesson is and, when he meets his section, does what he can to attain that ideal. In this attempt he is helped by the supervisors and makes rapid progress toward efficiency.

## PRACTICE TEACHING FACILITIES

Practice teaching is done in the Boulder public schools, both elementary and secondary. The Principal of the Boulder High School is Instructor in Secondary Practice Teaching, and the Superintendent of Schools is Instructor in Elementary Practice Teaching. This arrangement in part insures the very cordial relations that obtain between the city school officials and the University. The practice teaching in both the high and elementary schools is done under most natural conditions. The high school is one of the largest and most efficient in the State, and the elementary schools are second to none. The apprentice teachers are getting their experience in real schools.

## GRADUATE WORK

Graduates of the College of Education, or of institutions of a similar character, may continue the study of education in the Graduate School of the University as candidates for the degree of Master of Arts, and for the Master's Diploma in Education. One year of resident study is required. The candidate for the higher degree and the diploma in education is expected to devote one-half of his time to academic subjects and one-half to professional study in advance of the requirements for the Bachelor's degree, a part of which must demonstrate through practice teaching superior efficiency in instruction. The Master's Diploma in Education is an honor certificate, given only to those who, in addition to fulfilling, by resident work and a thesis, the requirements for the Master's Degree of the Graduate School of the University, give evidence of eminent educational ability and capacity for leadership.

## COMMITTEE ON THE RECOMMENDATION OF TEACHERS

The College of Education, through the Committee on the Recommendation of Teachers, will make every effort to place its students and graduates in the positions for which their general education and professional preparation have equipped them. The committee maintains communication with Superintendents and Boards of Education with reference to vacancies, and invites correspondence from school authorities who are in need of professionally trained teachers. Students of the University, who intend to teach, and graduates of the University, who are now engaged in teaching and who wish to secure better positions should register with the committee. No fee is charged for registration or for any service rendered.



## STATE DIPLOMAS

The 17th General Assembly passed House Bill No. 423 in which Sections 4 and 7 provide as follows:

Sec. 4. The State Board of Education shall issue State diplomas upon application, without examination, to applicants who shall be graduates of colleges situated within the State of Colorado, which maintain a standard four-year course of collegiate work and require four standard years of high school work or its equivalent, for admission, and who shall also exhibit evidence satisfactory to the State Board of Education of good moral character, and who shall also present evidence to the State Board of Education that they have twenty-four months of successful teaching experience, and who shall also produce evidence satisfactory to the State Board of Education, of professional training equivalent to at least one-sixth of a standard four-years' college course in at least three of the following groups of subjects, one of which shall be Practice Teaching, to-wit:

- (1) General and Educational Psychology.
- (2) History of Education.
- (3) Science and Principles of Education.
- (4) Practice Teaching and Special Methods.
- (5) Organization and Management of Schools.
- (6) Philosophy, Sociology, and Anthropology.

Sec. 7. State diplomas, granted under the provisions of this act, shall license the holders thereof to teach in the public schools of any county, city, town, or district in the State without the necessity of any other examination for a period of five years, unless sooner revoked by the State Board of Education, and at the expiration of said time, the same may be renewed for a like period of five years in the discretion of the State Board of Education, and at the expiration of this time, the same may be renewed for life upon presentation to the State Board of Education of satisfactory evidence of professional growth and efficiency; *Provided*, That the State Board of Education shall issue upon application, without examination, to those persons who possess the qualifications set forth in Section 4 of this act, experience in teaching alone excepted, a temporary, non-renewable certificate to teach for five years in the public schools of Colorado,



# GRADUATE SCHOOL

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## \*FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

J. RAYMOND BRACKETT, B.A., 1875, Bates; Ph.D., 1880, Yale.  
Professor of Comparative and English Literature; Dean.

IRA M. DELONG, B.A., 1878, M.A., 1881, Simpson College.  
Professor of Mathematics.

FRED B. R. HELLEMS, B.A., 1893, Toronto; Ph.D., 1898, Chicago.  
Professor of Latin.

†CHARLES C. AYER, B.A., 1889, Harvard; Ph.D., 1896, Strasburg.  
Professor of Romance Languages.

S. GRISWOLD MORLEY, B.A., 1898, Tufts; M.A., 1899, Ph.D., 1902,  
Harvard.  
Acting Professor of Romance Languages.

GEORGE NORLIN, B.A., 1893, Hastings College; Ph.D., 1899, Chicago.  
Professor of Greek.

FRANCIS RAMALEY, B.S., 1895, Ph.D., 1899, Minnesota.  
Professor of Biology.

MELANCHTHON F. LIBBY, B.A., 1890, Toronto; Ph.D., 1900, Clark.  
Professor of Philosophy.

JOHN B. PHILLIPS, B.A., 1889, M.A., 1891, Indiana; Ph.D., 1897,  
Cornell.  
Professor of Economics and Sociology.

WILLIAM H. PEASE, B.A., 1894, Toronto; LL.B., 1897, Colorado.  
Professor of Law.

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\* This Faculty is made up of the Professors of the various Faculties of the University who offer work in the Graduate School.

† On leave of absence, 1910-1911.

JOHN BERNARD EKELEY, B.A., 1891, M.A., 1893, Colgate; Ph.D., 1902,  
University of Freiberg in Baden.

Professor of Chemistry.

RUSSELL D. GEORGE, B.A., 1897, M.A., 1898, McMaster.

Professor of Geology.

JOHN D. FLEMING, B.A., 1875, Central University; LL.B., 1879,  
Louisville; LL.D., 1910, Central University.

Professor of Law.

MILO S. KETCHUM, B.S., 1895, C.E., 1900, Illinois.

Professor of Civil Engineering.

HERBERT S. EVANS, B.S., 1898, E.E., 1900, Nebraska.

Professor of Electrical Engineering.

JOHN A. HUNTER, B.S., 1890, M.E., 1896, Pennsylvania State College.

Professor of Mechanical Engineering.

THEODORE D. A. COCKERELL, ,

Professor of Systematic Zoology.

GEORGE M. CHADWICK,

Professor of Music.

JAMES F. WILLARD, B.S., 1898, Ph.D., 1902, Pennsylvania.

Professor of History.

OLIVER C. LESTER, B.A., 1897, Central College, Missouri; M.A., 1902,  
Ph.D., 1904, Yale.

Professor of Physics.

FRANK E. THOMPSON, B.A., 1901, Stanford.

Professor of Education.

ROSS C. WHITMAN, B.A., 1894, M.D., 1899, Michigan.

Professor of Medicine.

JUNIUS HENDERSON, B.A., 1908, Colorado.

Professor of Natural History and Curator of Museum.

JOHN S. McLUCAS, B.A., 1893, South Carolina College; B.A., 1895,  
M.A., 1899, Harvard.

Professor of English.

GRACE FLEMING VAN SWERINGEN, B.L., 1893, Cornell; Ph.D., 1904,  
University of Berlin.

Professor of German.

CLOUGH T. BURNETT, M.D., 1908, Michigan.

Professor of Bacteriology.

MILO G. DERHAM, B.A., 1892, Cornell; Ph.D., 1904, Colorado.  
Professor of Latin.

SAUL EPSTEEN, B.S., 1900, California; Ph.D., 1901, University of  
Zurich.

Professor of Engineering Mathematics; Secretary.

LAWRENCE W. COLE, B.A., 1899, Oklahoma; M.A., 1904, Ph.D., 1910,  
Harvard.

Professor of Psychology and Education.

\*RALPH D. CRAWFORD, B.A., 1905, M.A., 1907, Colorado.  
Assistant Professor of Geology.

DAVID R. JENKINS, B.S. (E.E.), 1904, E.E., 1907, Colorado.  
Assistant Professor of Electrical Engineering.

CLEMENT C. WILLIAMS, B.S. (C.E.), 1907, Illinois; C.E., 1909,  
Colorado.

Assistant Professor of Civil Engineering.

S. ANTOINETTE BIGELOW, B.A., 1893, Wellesley; M.A., 1910, Columbia.  
Assistant Professor of Literature.

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\* On leave of absence, 1910-1911.

## GRADUATE COMMITTEE

J. RAYMOND BRACKETT, Dean.

FRANCIS RAMALEY,

JOHN B. PHILLIPS,

SAUL EPSTEEN, Secretary.

# GENERAL STATEMENT

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## ANNOUNCEMENT

The University of Colorado offers graduate instruction to those who desire a more liberal education than is afforded by the college or professional course, to those who wish to prepare for the larger duties of citizenship, and to those who wish to become investigators in a special subject. The call in all higher intellectual fields is for a preparation considerably more advanced than the college course. The graduate school of the modern university is the place of professional training for philosophy, languages, literature, science, and the public service; systematic graduate study is invaluable to writers, journalists, teachers, economists, legislators, and special investigators in science and philosophy.

The University of Colorado offers to graduates of colleges and universities the use of its fine library, new laboratories, and advanced courses of study.

Graduate students who meet the requirements for higher degrees, receive personal sympathy in arranging their work, and aid toward securing a start in their chosen career.

## ADMISSION

Graduates from any college or scientific school of good standing are admitted upon presentation of diploma and certificate of good character.

Upon entrance, the student confers with the Dean of the Graduate School regarding the selection of a chief subject of study; the minors are elected on consultation with the professor in charge of the major.

Candidates for the degree Doctor of Philosophy must have a reading knowledge of both French and German. Candidates for the degree Master of Arts must have a reading knowledge of French or German, but the professor in charge of the major subject may require both French and German.

## GRADUATE COMMITTEE

The Graduate Committee consists of the Dean of the Graduate School, the Secretary, and two other professors. The Dean and the Graduate Committee supervise the election of studies, and, after receiving reports from the professors giving instruction, recommend candidates to the Graduate faculty for degrees.

## RESIDENCE

The University of Colorado does not grant credit for work done *in absentia*; but this rule does not apply to graduates of this Institution who are candidates for the degree of Engineer. For a year to count as residence, a student should be located at the University and give his undivided attention to academic work, completing not less than thirty hours.

## ADVANCED STANDING

Credit is given for work done in other universities, but at least one full year of residence at the University is required for each higher degree.

## RECORD OF SCHOLARSHIP

A book is issued to each graduate student in which the Dean enters the courses he is to take. At the end of each semester the student submits his book to each instructor for signature; then to the Dean for record. On leaving the Institution the book becomes his personal property, and is a sufficient evidence of the scope and character of his work.

## FEES AND EXPENSES

There is no tuition fee in the Graduate School; there is a diploma fee of ten dollars. Alumni of other institutions pay a matriculation fee of ten dollars.

## INSTRUCTORSHIPS

Students making special investigations have opportunities to study the teaching of the subjects they pursue, and, if they show special ability, may become candidates for instructorships.

## CANDIDATES FOR A DEGREE

**MASTER OF ARTS**—A graduate student wishing to become a candidate for the degree Master of Arts should make special application as soon as possible after matriculation.

**DOCTOR OF PHILOSOPHY**—A student entering the University for the first time should work some months, that his ability may be known, before applying for enrollment as a candidate for the degree Doctor of Philosophy.

Applications for candidacy should include a programme of studies leading to the degree, a list of undergraduate work in the same lines, a statement of any original work already accomplished, and an enumeration of honors and degrees.

### REQUIREMENTS FOR DEGREES

Candidates for the degree Master of Arts or Doctor of Philosophy must present credits for at least one year's residence at this University, and evidence of having completed a course of study approved by the Dean and Graduate Committee.

**MASTER OF ARTS**—The work required is one full year. Six copies of the Master's thesis or dissertation, printed or typewritten and bound, are to be placed in the University library.

**DOCTOR OF PHILOSOPHY**—The work required is three years of residence, which shall include as a minimum, 5 semesters of 12 hours each and a thesis. The first two years may be spent at other universities in actual residence; or the first two years may be done here and the third spent in the preparation of a thesis at some approved university.

The thesis for the Doctor's degree must show power in original investigation; it is printed and from fifty to one hundred copies placed in the University library for the use of the University.

Students applying credits from other universities should bring letters from their instructors showing quality and amount of work. The final examination covers all subjects presented for the degree, whether done here or elsewhere.

The following degrees are offered to students specially prepared in Engineering:

**MASTER OF SCIENCE**—A candidate for the degree Master of Science must have previously received the degree B.S. in Engineering from this University; or if graduated elsewhere, he must satisfy the Faculty that he possesses equivalent attainments. He must choose a major subject to occupy one-half his time from the graduate courses offered in the line in which he received his Bachelor's degree. Study



and residence for not less than one year and a thesis on an approved subject are required. A year's work includes thirty hours, of which not less than six hours should be given to the thesis.

CIVIL ENGINEER, ELECTRICAL ENGINEER, MECHANICAL ENGINEER—The degree of Engineer may be conferred upon a Bachelor of Science of this University who has taken the B.S. degree in the course for which he is a candidate for the higher degree, if he furnish satisfactory evidence that he has pursued further technical studies for at least one year, has presented a satisfactory thesis on an approved engineering topic, and in addition has been employed in professional work in positions of responsibility for at least another year. If the candidate does not reside at the University, his course of study must be approved in advance by the professor in charge of the department; and he must prepare an approved thesis on some engineering topic to be presented together with a detailed account of his professional work, at least one month before the annual commencement at which he expects to take his degree. Candidates must be registered for two years in advance of the commencement at which the degree is to be conferred.

Graduates of other institutions must complete one year of work and residence in this University.

## INSTRUCTION

Students admitted to the Graduate School may pursue any course in the College of Liberal Arts, College of Engineering and professional schools for which they are qualified.

The Graduate Faculty does not put hindrances in the way of mature students; almost any reasonable programme of study will be approved if it forms a consistent plan of work or is to be pursued with some definite aim.

But courses will be counted towards a degree only when recommended for that purpose by the professors in charge of such courses.

The courses of study offered especially to graduate students may be grouped as follows:

- I. Greek Language and Literature.
- II. Latin Language and Literature.
- III. Germanic Languages and Literature.
- IV. Romance Languages and Literature.
- V. Literature (in English).

- VI. English Language.
- VII. Mathematics.
- VIII. Civil Engineering.
- IX. Electrical Engineering.
- X. Mechanical Engineering.
- XI. Physics.
- XII. Chemistry.
- XIII. Biology.
- XIV. Geology.
- XV. Philosophy.
- XVI. Psychology.
- XVII. Education.
- XVIII. History.
- XIX. Law.
- XX. Social Science.
- XXI. Music.

## \*DESCRIPTION OF COURSES

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### I. GREEK LANGUAGE AND LITERATURE

PROFESSOR NORLIN:—

11. THE GREEK PASTORAL.  
With special study of Theocritus.
12. PLATO.  
Interpretation of the Republic.
13. THUCYDIDES.
14. LYRIC POETS, INCLUDING PINDAR AND BACCHYLIDES.
15. GREEK TRAGIC POETS.

*For Graduates Only.*

22. ARISTOTLE'S POLITICS AND CONSTITUTION OF ATHENS.
23. HISTORY OF GREEK COMEDY.
24. INTRODUCTION TO GREEK EPIGRAPHY.
25. STUDY OF GREEK DIALECTS FROM INSCRIPTIONS.
26. SEMINAR IN POETS OF ALEXANDRIAN PERIOD.
27. SEMINAR IN EARLY GREEK PHILOSOPHY.
28. SEMINAR IN GREEK MYTHOLOGY AND RELIGION.

### II. LATIN LANGUAGE AND LITERATURE

PROFESSORS HELLEMS AND DERHAM:—

16. LUCRETIVS.
19. MARTIAL.
22. SUETONIUS.
24. ADVANCED LATIN PROSE.
25. GREEK AND ROMAN ARCHÆOLOGY.

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\* The graduate courses, which may be elected by under graduates also, are listed under the same numbers as in the College of Liberal Arts. The courses for graduates only are described here.

*For Graduates Only.*

26. ROMAN LAW.
  - (1) Gaii Institutiones Juris Civilis. 3 h.
  - (2) Elements of Roman Law. 2 h.
27. ROMAN ADMINISTRATION. 3 h.  
The development of Roman public institutions in their historical sequence.
28. ROMAN TOPOGRAPHY. 2 h.  
The topography of Rome in the historical development of the city.
29. INTERPRETATION OF EARLY LATIN. 2 h.  
Selected examples of Early Latin.
30. EPIGRAPHY. 2 h.  
Cagnat's Cours d'Epigraphie Latine; Egbert's Introduction; handling of the Corpus Inscriptionum Latinarum.
31. LATIN MORPHOLOGY. 2 h.  
The subject will be approached from the comparative side.
32. LATIN SYNTAX. 2 h.  
The subject will be treated comparatively.
33. LATIN PALÆOGRAPHY. 2 h.  
An introduction to the subject.
34. SEMINAR ON DOMITIAN.  
A study of the sources for the life and reign of Domitian; particular stress will be laid on the epigraphical side.
35. TACITUS. 2 h.  
A rapid reading course in the Annals with a consideration of the historical problems raised.
36. PERSIUS. 2 h.  
Interpretation of the text; Stoicism in the early Empire.
37. ROMAN PROVINCIAL ADMINISTRATION.  
Pliny, Letters, book X; selections from Cicero's correspondence.

## III. GERMANIC LANGUAGES AND LITERATURE

PROFESSOR VAN SWERINGEN:—

## GERMAN

8. THE GERMAN DRAMA OF THE NINETEENTH CENTURY.
11. GÖTTE'S FAUST.

*For Graduates Only.*

18. THE HISTORY OF GERMAN LITERATURE FROM THE EARLIEST TIMES TO THE TIME OF KLOPSTOCK. *First semester.* 3 h.  
Lectures; collateral reading; papers.
19. THE HISTORY OF GERMAN LITERATURE FROM THE TIME OF KLOPSTOCK TO THE PRESENT. *Second semester.* 3 h.  
Lectures; collateral reading; papers.
20. OLD HIGH GERMAN. *Two semesters.* 2 h.  
Braune's Althochdeutsche Grammatik, and Althochdeutsches Lesebuch.
21. MIDDLE HIGH GERMAN. *Two semesters.* 2 h.  
Paul's Mittelhochdeutsche Grammatik; reading of Hartman von der Aue's Der Arme Heinrich.
22. GERMANIC HERO-SAGAS. *One semester.* 3 h.  
Lectures; recitations; collateral reading.
23. GERMANIC MYTHOLOGY. *One semester.* 3 h.  
Primitive Germanic religion, customs and ideals of life, in their relation to German literature.  
Lectures; recitations; collateral reading.

## GOTHIC.

*For Graduates Only.*

24. GOTHIC. *One semester.* 2 h.  
Phonology and inflections of Gothic; relation of Gothic to German and English; reading of extracts in Braune's Gotische Grammatik.

## SCANDINAVIAN.

*For Graduates Only.*

25. OLD ICELANDIC. *Two semesters.* 2 h.  
Phonology and inflection of Old Icelandic, from Noreen's Altisländische und Altnorwegische Grammatik.  
Reading of Heusler's Zwei Isländer-Geschichten.
26. THE EDDA. *Both semesters.* 3 h.  
Gering's Edition of Hildebrand's Edda Lieder.

## IV. ROMANCE LANGUAGES AND LITERATURE

PROFESSOR AYER:—

## FRENCH.

- 7-8. HISTORY OF FRENCH LITERATURE.

*For Graduates Only.*

9. OLD FRENCH GRAMMAR AND COMPARATIVE ROMANCE PHILOLOGY.  
2 h.
10. READING OF OLD FRENCH TEXTS. 2 h.  
Bartsch's Chrestomathie de l'Ancien Francais.
11. COMPARATIVE ROMANCE SYNTAX, ON BASIS OF FRENCH. 2 h.

## SPANISH.

5. LOPE DE VEGA AND CALDERON.
6. ADVANCED PROSE COMPOSITION.

*For Graduates Only.*

7. INTRODUCTION TO OLD SPANISH.  
Lectures and seminar exercises.  
Comparative Romance Philology, with special reference to Spanish, Keller's Altspanishches Lesebuch; El Poema del Cid.

## ITALIAN.

3. THE LIFE AND WORKS OF DANTE.
4. PETRARCH AND BOCCACCIO.

*For Graduates Only.*

5. INTRODUCTION TO OLD ITALIAN.  
Lectures and seminar exercises.  
Comparative Romance Philology, with special reference to Italian. Monaci's Crestomazia Italiana dei primi secoli.

## V. COMPARATIVE AND ENGLISH LITERATURE

PROFESSOR BRACKETT, DEAN BIGELOW, MISS BELL:—

5. ART-FORM.
10. TENNYSON.
14. SHAKESPEARE.
15. THE GREAT DRAMA.
16. COMPARATIVE LITERATURE.
17. THE EPIC.
18. WORLD DRAMA.
19. MASTERPIECES OF FICTION FROM THE EARLIEST TIMES.

*For Graduates Only.*

20. THE HISTORY OF ENGLISH LITERATURE.  
Study of selected periods; the Elizabethan period; the age of Milton; the nineteenth century; contemporary authors.



21. STUDIES IN VICTORIAN LITERATURE AND ART. *Throughout the year.* 5 h.

Ruskin and Turner; the Pre-Raphaelite Movement; the Rossettis; Burne-Jones; Holman-Hunt; George Frederick Watts; William Morris; Walter Crane. 1908.

22. THE PREDECESSORS OF SHAKESPEARE. 5 h. 1904.  
 23. THE RENAISSANCE IN EUROPE. 5 h. 1909.  
 24. ROMANTICISM.  
 25. THE TEACHING OF LITERATURE.

## VI. ENGLISH LANGUAGE

PROFESSOR McLUCAS:—

- 8-9. ANGLO-SAXON.  
 10. MIDDLE ENGLISH.  
 11. CHAUCER.  
 12-13. SHAKESPEARE.  
 14. PRE-SHAKESPEAREAN DRAMA.

## VII. MATHEMATICS

PROFESSOR DELONG AND PROFESSOR EPSTEEN:—

4. DIFFERENTIAL CALCULUS.  
 5. INTEGRAL CALCULUS.  
 13. SOLID ANALYTIC GEOMETRY.

*\*For Graduates Only.*

EITHER SEMESTER.

(Credits and hours to be arranged.)

15. ADVANCED ANALYTIC GEOMETRY.  
     Course 3 prerequisite.  
 16. THEORY OF EQUATIONS.  
 17. THEORY OF FUNCTIONS.  
     Course 5 prerequisite.  
 18. HYPERCOMPLEX NUMBER SYSTEMS.  
 19. CONTINUOUS GROUPS.  
     Courses 5 and 6 prerequisite.  
 20. PARTIAL DIFFERENTIAL EQUATIONS, WITH APPLICATIONS IN GEOMETRY AND PHYSICS.  
     Courses 6 and 13 prerequisite.

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\*Not more than two of the courses, 15-22 inclusive, will be offered in any one semester.

21. SELECTED TOPICS IN HIGHER MATHEMATICS.
22. MATHEMATICAL SEMINAR.

## VIII. CIVIL ENGINEERING

PROFESSOR KETCHUM AND ASSISTANT PROFESSOR WILLIAMS:—

*For Graduates Only.*

101. RAILWAY LOCATION AND CONSTRUCTION.
102. YARDS AND TERMINALS.
103. SIGNAL ENGINEERING.
104. RAILWAY OPERATION AND MANAGEMENT.
105. TUNNELS AND CANALS.
110. ADVANCED BRIDGE DESIGN.
111. SWING AND MOVABLE BRIDGES.
112. METALLIC ARCHES.
113. INDETERMINATE STRUCTURES.
114. STEEL OFFICE BUILDING CONSTRUCTION.
115. STEEL MINE AND MILL STRUCTURES.
120. REINFORCED CONCRETE CONSTRUCTION.
130. GENERAL WATER WORKS CONSTRUCTION AND MANAGEMENT.
131. TANKS, STANDPIPES AND RESERVOIRS.
140. SEWAGE PURIFICATION AND DISPOSAL WORKS.
141. GENERAL SEWERAGE DESIGN AND CONSTRUCTION.
150. IRRIGATION ENGINEERING STRUCTURES.
151. IRRIGATION ENGINEERING STUDIES.
152. DAMS AND RESERVOIRS FOR IRRIGATION.
160. HYDRAULICS.
161. HYDRAULICS OF RIVERS, WEIRS AND SLUICES.

## IX. ELECTRICAL ENGINEERING

PROFESSOR EVANS AND ASSISTANT PROFESSOR JENKINS.

*For Graduates Only.*

101. THEORY OF ALTERNATING CURRENTS.
102. ANALYSIS AND DESIGN OF ALTERNATING CURRENT APPARATUS.
103. ANALYSIS AND DESIGN OF DIRECT CURRENT APPARATUS.
104. SWITCHBOARD DESIGN AND CONSTRUCTION.
105. THE TESTING OF ELECTRICAL MACHINERY.
106. ELECTRICAL ENGINEERING RESEARCH.
107. TELEPHONES AND TELEGRAPH.
108. ELECTRICAL TRANSMISSION OF POWER.

- 109. ELECTRIC LIGHT AND POWER PLANTS.
- 110. ELECTRO-METALLURGICAL INDUSTRIES.
- 111. ADVANCED ELECTRICAL ENGINEERING LABORATORY.

## X. MECHANICAL ENGINEERING

PROFESSOR HUNTER:—

*For Graduates Only.*

- 101. ADVANCED MACHINE DESIGN.
- 102. GRAPHICS AND KINEMATICS.
- 103. ADVANCED STEAM ENGINEERING.
- 104. EXPERIMENTAL ENGINEERING.
- 105. PNEUMATICS.
- 106. RAILWAY MECHANICAL ENGINEERING.
- 107. MECHANICAL REFRIGERATION.

## \*XI. PHYSICS

PROFESSOR LESTER:—

- 6. THEORETICAL MECHANICS.
- 7. THEORY OF ELECTRICITY AND MAGNETISM.
- 8-9. ELECTRICAL MEASUREMENTS. Credit according to the amount and nature of the work.  
Prerequisites: Courses 1, 2, 3, 4 and calculus.
- 10. THEORY OF ELECTRICITY AND MAGNETISM. Hours to be arranged.
- 11-12. INTRODUCTION TO THEORETICAL PHYSICS. Hours to be arranged.  
Prerequisites: Courses 1, 2, 6 and calculus.
- 13-14. ADVANCED EXPERIMENTAL PHYSICS.  
Prerequisites: Courses 1, 2, 3, 4, and calculus; also to be taken with or to follow Course 11-12.
- 15. THEORY OF ELECTRONS.  
Prerequisites: Courses 1, 2, 6, 7, or 11 and calculus.
- 17. STATICS.
- 18. VECTOR ANALYSIS. *Both semesters. 2 h.*

*For Graduates Only.*

- 19. RADIO-ACTIVITY. *First semester. 1 h. Second semester. 2 h.*  
A reading course embracing the discovery of radio-activity, the chemical and physical properties of the radio-active substances.

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\* Each course is given annually with the exception of 10 and 12, which are given when there is sufficient demand.

and the recent investigations concerning them. This is supplemented, in the second semester, by laboratory work on the methods of detecting and measuring radio-activity.

20. ADVANCED MECHANICS. *Both semesters. 2 or 3 h.*

This course is designed primarily for students intending to specialize in the physical and mathematical sciences. Special emphasis is laid upon general principles. Among the subjects considered are: force, moment, impulse and energy, equations; damped and forced vibrations; central forces; D'Alembert's principle; elasticity; Green's theorem and the theory of potential; Lagrange's equations; principle of least action.

Prerequisites: Course 6 and advanced calculus, differential equations.

## XII. CHEMISTRY

PROFESSOR EKELEY:—

3-4. QUALITATIVE ANALYSIS.

5a and 5b. QUALITATIVE ANALYSIS.

Gravimetric.

6a and 6b. QUANTITATIVE ANALYSIS.

Volumetric.

7. ANALYSIS OF IRON AND STEEL.

8. SANITARY WATER ANALYSIS.

9. MINERAL WATER ANALYSIS.

10. ORE ANALYSIS.

11. GAS ANALYSIS.

12. ORGANIC CHEMISTRY.

Lectures.

14. ORGANIC PREPARATIONS.

15. ULTIMATE ANALYSIS OF ORGANIC COMPOUNDS.

16. FOOD ANALYSIS.

17. PHYSICAL CHEMISTRY.

Lectures.

18. PHYSICO-CHEMICAL LABORATORY METHODS.

19. ELECTROCHEMISTRY.

20. ELECTROCHEMICAL ANALYSIS.

21. LABORATORY PRACTICE IN ELECTROCHEMISTRY.

22. PHYSIOLOGICAL CHEMISTRY.

Lectures.

## 23. PHYSIOLOGICAL CHEMISTRY.

Laboratory.

## 24. INDUSTRIAL CHEMISTRY.

NOTE.—Candidates for the Master's degree, taking chemistry as a major, must have completed courses Nos. 1, 2, 3, 4, 5a, 5b, 6a, 6b, 7, 10, 12, 14, 17, 18, 19, 21. Courses from No. 6 on may be counted toward the thirty-hour requirement, in case they have not already been counted toward the bachelor's degree; in such cases special courses in chemistry may be arranged for.

## XIII. BIOLOGY

## BOTANY.

PROFESSOR RAMALEY:—

*For Graduates Only.*

## 11. PLANT ECOLOGY.

In this course the student becomes acquainted with the principles of ecological plant geography and the physiological facts which are necessary for an understanding of those principles. In particular he studies the plant geography of Colorado and of North America.

Research work in ecology is provided at the mountain laboratory at Tolland, Colorado. Prospective students should consult the Summer School Announcement.

## 12. PLANT ANATOMY.

A general account of the history of plant anatomy and the recent developments of the subject with practical laboratory investigation of special groups.

## 13. ALGOLOGY.

A study of the classification of algæ, both fresh water and marine; examination of a large series of specimens.

## ZOOLOGY.

PROFESSORS COCKERELL AND RAMALEY:—

*For Graduates Only.*

## 11. EMBRYOLOGY AND HISTOLOGY OF VERTEBRATES.

A part of the work will be done with the regular undergraduate class in this subject but special topics will be assigned to graduate students.

## 12. SPECIAL PROBLEMS.

Palæo-entomology, Ichthyology, Taxonomy of Hymenoptera, Coccidæ (scale insects), and others as opportunity offers.

## XIV. GEOLOGY

PROFESSORS GEORGE, HENDERSON, AND ASSISTANT PROFESSOR  
CRAWFORD:—

7-8. ECONOMIC GEOLOGY.

9-10. MINERALOGY, DESCRIPTIVE AND DETERMINATIVE.

11. QUANTITATIVE MINERALOGY.

12. GEOLOGY OF COLORADO.

13. GEOLOGICAL MATERIALS FOR INDUSTRIAL CHEMISTRY.

14-15. ADVANCED FIELD GEOLOGY.

16-17. PALEONTOLOGY.

18-19. PETROGRAPHY. *Both semesters. One single and two double periods per week. Hours will be arranged.*

*For Graduates Only.*

20. ADVANCED GEOLOGY. *One or both semesters.*

The work will be chiefly individual and will depend largely on the previous training of the student. The vicinity of Boulder offers a wide range of problems for research work. The credit allowed will depend upon the time given to the work and the character of the results as shown by the reports, maps, etc.

Prerequisite: Previous training in one or more lines of geological work.

NOTE.—The establishment of the State Geological Survey has given very exceptional opportunities to a limited number of advanced students in the geological departments of the colleges of the State.

## XV. PHILOSOPHY

PROFESSOR LIBBY:—

All undergraduate courses are open to candidates for higher degrees. The *thesis-subject* may be chosen from any branch of Philosophy.

For M.A.

For *major*, undergraduate courses, and advanced readings in sources of Philosophy, and in Metaphysics; for *minor*, a thorough knowledge of the history of Philosophy only.

For Ph.D.

For *major*, courses for M.A. major, with further advances in history of Philosophy and in special disciplines. Candidate must be able to read German and French at sight. For *minor*, advanced history of Philosophy only, including special knowledge of two philosophers.



## XVI. PSYCHOLOGY

PROFESSORS COLE AND THOMPSON:—

2. COMPARATIVE PSYCHOLOGY.
3. ADVANCED PSYCHOLOGY.
- 5-6. EXPERIMENTAL PSYCHOLOGY.
8. SOCIAL PSYCHOLOGY. (EDUCATION 11.)
9. CHILD STUDY. (EDUCATION 13.)
10. SEMINAR IN PSYCHOLOGY.

*For Graduates Only.*

11. ADVANCED EXPERIMENTAL PSYCHOLOGY.

Students in this course will be expected to carry on systematic investigations in special problems.

## XVII. EDUCATION

PROFESSORS THOMPSON, COLE, AND LIBBY:—

9. HISTORY OF ANCIENT AND MEDIEVAL EDUCATION.
10. HISTORY OF MODERN EDUCATION.
11. SOCIAL PSYCHOLOGY. (PSYCHOLOGY 8.)
12. EDUCATION AND SOCIETY.
13. CHILD STUDY. (PSYCHOLOGY 9.)
16. CONTEMPORARY EDUCATIONAL PROBLEMS.
17. PHILOSOPHY OF EDUCATION.
18. PRACTICUM IN EDUCATION.

## XVIII. HISTORY

PROFESSOR WILLARD:—

9. MODERN ENGLAND.
10. HISTORICAL BIBLIOGRAPHY.
12. AMERICAN COLONIAL HISTORY.
13. CIVIL WAR AND RECONSTRUCTION.
14. THE MEDIEVAL CHURCH AND THE REFORMATION.

*For Graduates Only.*

16. ENGLAND IN THE FOURTEENTH CENTURY. *Throughout the year.*  
*Th. 2:00-4:00. 2 h.*

A seminar course on the social, economic, and political history of England during the fourteenth century; intended to teach methods of research in European history to those who desire to specialize in that subject. Not given in 1910-1911.

## XIX. LAW

PROFESSOR FLEMING:—

CONSTITUTIONAL LAW. 4 h.

SALES OF PERSONAL PROPERTY. 4 h.

IRRIGATION. 3 h.

PROFESSOR REED:—

BILLS AND NOTES. 5 h.

PRIVATE AND MUNICIPAL CORPORATIONS. 5 h.

DOMESTIC RELATIONS. 3 h.

PROFESSOR PEASE:—

REAL PROPERTY. 5 h.

LAW OF CONTRACTS. 5 h.

MR. FOLSOM:—

BAILMENTS AND CARRIERS. 2 h.

## XX. SOCIAL SCIENCE

PROFESSOR PHILLIPS:—

4. ADVERTISING.
5. PRINCIPLES OF SOCIOLOGY.
6. PROBLEMS IN SOCIOLOGY.
7. THEORY AND APPLICATION OF STATISTICS.
8. NATIONAL ADMINISTRATION.
9. STATE AND LOCAL GOVERNMENT.
10. POLITICS.
11. POLITICAL PARTIES AND PARTY PROBLEMS.
12. CITY GOVERNMENT IN THE UNITED STATES.
13. CITY GOVERNMENT IN COLORADO.
14. CONSULAR AND DIPLOMATIC SERVICE.
15. HISTORY OF COMMERCE.
16. ECONOMIC AND COMMERCIAL GEOGRAPHY.
17. CURRENT ECONOMIC PROBLEMS.
18. MONEY AND BANKING.
19. TRANSPORTATION.
20. CORPORATION FINANCE.
21. TAXATION.
22. THEORY OF INVESTMENTS (LIFE INSURANCE, ETC.)
23. THEORY AND PRACTICE OF ACCOUNTING.

*For Graduates Only.*

24. HISTORY AND CRITICISM OF ECONOMIC THEORIES. *First semester.*  
12:00. 2 h.

Lectures, reading, reports.

The lectures will deal with the economic ideas of Plato and Aristotle; the influence of the Roman Law; the Canonists; Mercantilists; Physiocrats; Adam Smith; Ricardo; Malthus; John Stuart Mill; the Historical School; Jevons and the Austrian School. The aim is not only to study the content of economic theory, but also to exhibit theory in the light of political and social conditions.

25. SEMINAR IN ECONOMICS AND SOCIOLOGY. *Throughout the year.*  
2 h.

## XXI. MUSIC

PROFESSOR CHADWICK:—

4. CANON AND FUGUE.
5. COMPOSITION AND ORCHESTRATION.
6. HISTORY OF MUSIC.
8. ÆSTHETICS AND PHILOSOPHY OF MUSIC.



# COLLEGE OF ENGINEERING

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## FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

MILO S. KETCHUM, C.E., Dean,  
Professor of Civil Engineering.

HERBERT S. EVANS, E.E.,  
Professor of Electrical Engineering.

JOHN A. HUNTER, M.E.,  
Professor of Mechanical Engineering.

SAUL EPSTEEN, Ph.D.,  
Professor of Engineering Mathematics.

\*CHARLES C. AYER, Ph.D.,  
Professor of Romance Languages.

S. GRISWOLD MORLEY, Ph.D.,  
Acting Professor of Romance Languages.

JOHN BURTON PHILLIPS, Ph.D.,  
Professor of Economics and Sociology.

JOHN BERNARD EKELEY, Ph.D.,  
Professor of Chemistry.

RUSSELL D. GEORGE, M.A.,  
Professor of Geology.

OLIVER C. LESTER, Ph.D.,  
Professor of Physics.

JOHN S. McLUCAS, M.A.,  
Professor of English.

GRACE FLEMING VAN SWERINGEN, Ph.D.,  
Professor of German.

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\* On leave of absence, 1910-1911.

CLOUGH T. BURNETT, M.D.,  
Professor of Bacteriology.

DAVID R. JENKINS, E.E.,  
Assistant Professor of Electrical Engineering.

CLEMENT C. WILLIAMS, C.E.,  
Assistant Professor of Civil Engineering.

GEORGE L. SULLIVAN, M.E.,  
Instructor in Mechanical Engineering.

GUY W. SMITH, B.S. (E.E.), M.S.,  
Instructor in Engineering Mathematics.

EDWARD C. STOCKER, B.S. (C.E.),  
Instructor in Civil Engineering.

OLLISON CRAIG, B.S. (M.E.),  
Instructor in Mechanical Engineering.

HARLAND C. WOODS, B.S. (C.E.),  
Instructor in Engineering Drawing.

JOSEPH B. MORRILL, B.S. (E.E.),  
Instructor in Electrical Engineering.

SIEBELT L. SIMMERING, B.S. (M.E.),  
Instructor in Mechanical Engineering.

\*MARGARET S. CARHART, M.A.,  
Instructor in Engineering English.

MILDRED S. MCARTHUR, M.A.,  
Instructor in German.

MARGARET L. WHEELER, M.A.,  
Instructor in Engineering English.

WHITNEY C. HUNTINGTON, B.S. (C.E.),  
Assistant in Civil Engineering.

FREDERICK V. BLISS, B.S. (E.E.),  
Assistant in Engineering Mathematics.

CARL M. DUFF, B.S. (C.E.),  
Assistant in Engineering Mathematics and in Engineering Drawing.

#### STAFF OF THE U. S. GOVERNMENT TIMBER TESTING STATION

NORMAN DE W. BETTS, M.E.,  
Engineer in Charge.

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\* On leave of absence, 1910-1911.



# GENERAL STATEMENT

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## PURPOSE

In accordance with the provisions of the Charter of the University, a School of Applied Science was authorized by the Board of Regents, and established in 1893. The name of the Department was changed to the College of Engineering, September, 1906.

It is the object of the College to provide thorough technological education of the highest grade. To this end there is combined with a broad theoretical training a very considerable amount of practical work in the shops and laboratories, supplemented by visits to large manufacturing establishments and power installations.

Regular courses of study, extending over four years, are offered in Civil, Electrical, Mechanical, and Chemical Engineering.

The work of the first two years of all courses, with a few minor exceptions, is the same. It is aimed in these years to lay a broad foundation for the more specialized work of the last two years. To this end the work is largely theoretical in character, and comprises courses in Mathematics, General Chemistry and Physics, Mechanical Drawing, Languages, and the Elements of Engineering subjects. Class room and lecture work is supplemented wherever practicable by laboratory courses.

In the last two years the work is more specialized, and the fourth year is almost entirely devoted to technical work in the several branches of Engineering.

## REQUIREMENTS FOR ADMISSION

See page 56.

## ADMISSION TO ADVANCED STANDING

Students from other institutions will be admitted to any class not later than the first term of the senior year on passing examinations in the subjects given in the preceding years in the College of Engineering, or on presentation of satisfactory certificates, showing

that the required work has been done in other technical schools. A certificate of honorable dismissal will also be required.

Graduates from other colleges will be admitted without examination, and allowed to pursue such courses as their previous work will permit.

By proper election of subjects in the collegiate course, such as sciences, mathematics, and languages, a graduate of the arts department can obtain his engineering degree in two years. Such a course affords a very broad general training, and is to be highly recommended.

## DEGREES

Upon the satisfactory completion of the prescribed and elective work in any course, the degree, Bachelor of Science in the course pursued, will be conferred.

As a prerequisite to graduation, each student is required to present a satisfactory thesis on a subject requiring original research work along technical lines, or an extended study of some engineering problem or appliance.

The degree of Master of Science (M.S.) is given upon completion of one year's graduate work in residence after having obtained the degree of Bachelor of Science in Engineering. The year's work requires thirty (30) semester hours' credit, of which at least six (6) hours shall be devoted to a thesis.

The degree of Civil Engineer (C.E.), Electrical Engineer (E.E.), or Mechanical Engineer (M.E.), is given for one year's academic work, and a thesis, after the candidate has had at least one year's responsible charge of engineering work. The academic work for graduates of this Institution need not be done in residence. A candidate must be registered for at least two years before coming up for the degree of Engineer.

For further details of graduate work see the Graduate School.

## EQUIPMENT

### BUILDINGS.

The College of Engineering occupies the Engineering Building and the Engineering Shops situated at the eastern end of the Quadrangle. The buildings are well planned for Engineering instruction and are devoted entirely to the technical work of the College.

**ENGINEERING BUILDING**—The basement contains the applied mechanics, timber testing, hydraulic, road materials testing, and cement laboratories.

On the first floor are located the electrical and mechanical engineering laboratories, senior electrical and mechanical engineering drawing rooms, and class rooms.

The second floor is devoted to drawing and instrument rooms for the civil engineering department, general class rooms and the reading room.

The laboratories, class rooms and drawing rooms are commodious and well lighted.

All buildings on the campus are heated and lighted from a central power plant.

**ENGINEERING SHOPS**—The Shop Building consists of a one-story section containing a foundry forty by forty feet, a forge shop forty by forty feet, and a machine shop forty by eighty feet; and a two-story section containing a wood-bench shop forty by forty feet, and a wood-turning shop forty by forty feet on the first floor, and a freshman drawing room forty by eighty feet on the second floor. The one-story section is lighted by means of a modified saw-tooth roof.

#### CIVIL ENGINEERING EQUIPMENT.

The department of Civil Engineering possesses an extensive equipment of surveying instruments of the various standard makes, consisting of engineer's transits, solar attachments, mining transits, compasses, engineer's levels, solar compasses, plane tables, a sextant, barometers, chains and tapes, as well as smaller instruments. For use in surveying field work the department has a 100-foot standard of length, and a triangulation system with permanent monuments and a meridian and base line.

The department has two Leyner rock drills, mounted and equipped for illustrative and testing purposes.

The department also possesses an ample collection of drawings, blue prints, and photographs for use in design. Among the most valuable collections of plans for students' use are a set of detail plans of the A. T. & S. F. R. R. standard plate girder and truss bridges, donated by Mr. A. F. Robinson; and numerous detail plans of structures donated by the American Bridge Company. Blue print frames, an excellent selection of steel T squares, straight edges and protract-

ors, planimeters, scales, slide rules, and other special drawing tools are available to the student for the courses which involve drafting.

#### CEMENT LABORATORY.

The Cement Laboratory is equipped with a two thousand pound Fairbank's shot machine, a two thousand pound Riehle cement machine, briquette molds, tanks, Gilmore needles, vicat apparatus, sieves, hot water tanks, specific gravity apparatus, slate slabs, sample barrels of cement, and other necessary apparatus.

#### HYDRAULIC LABORATORY.

The equipment of the Hydraulic Laboratory consists of a tank in the third story of the building, affording a constant head, and in the laboratory, tanks supplied with various shaped notches and orifices for discharge instruments, channels of various shapes, standard orifices and tubes. The laboratory also contains a Venturi meter, water meters, piezometers, current meters, an A Doble 12-inch experimental water wheel equipped for experimental work, Pitot's tubes, a hook gage, platform scales, hose, and various smaller pieces of hydraulic apparatus.

#### LABORATORY OF APPLIED MECHANICS.

The laboratory of Applied Mechanics is equipped with a 30,000-pound Olsen testing machine direct connected to an electric motor; a 100,000-pound Olsen testing machine driven by an electric motor; a 200,000-pound Riehle testing machine that will test a 16-foot beam and an 8-foot column, direct connected to an electric motor; extensometer; compressometers; a 50,000-in.-lb. Olsen torsion testing machine, direct connected to an electric motor; a flexure machine; a stone saw; and miscellaneous small tools and apparatus necessary for making commercial tests of iron, steel, brick, stone and wood. The laboratory is equipped with an Olsen brick rattler, and all other equipment necessary for making commercial tests of paving brick. The equipment of the cement laboratory is available for work in testing cements, mortars, and concrete.

#### ROAD MATERIALS TESTING LABORATORY.

The equipment of the road materials testing laboratory consists of a Page impact machine for testing toughness of rock, a Page impact machine for cementation tests, a two cylinder abrasion machine, Deval type, a ball mill and other minor equipment for making commercial tests of road materials.

## U. S GOVERNMENT TIMBER TESTING STATION.

In addition to the above equipment the laboratory of Applied Mechanics contains the following additional equipment especially designed for the work of the U. S. Government Timber Testing Station: A Greaves & Klusman No. 3 planer driven by an electric motor; a J. A. Fay & Egan No. 77 rip and crosscut saw driven by an electric motor; a drying oven; a three point loader; a photographic dark room with full equipment; and miscellaneous tools. The laboratory has an overhead track and a one-ton hoist for handling heavy timbers and reinforced concrete beams. All apparatus in the laboratory is available for instructional purposes.

## ELECTRICAL ENGINEERING LABORATORIES.

The Electrical Engineering Laboratories are well equipped for the study of direct and alternating current apparatus, electrical testing and the investigation of problems concerning the design, installation and operation of electrical apparatus.

The laboratories include in their equipment a 50 H. P. alternating current motor, three phase; a 30 K. W. direct current, compound generator, belted type; a 10 K.W. rotary converter of special design, with six collector rings and arranged for operation as a single phase, two phase or three phase machine, compound wound and equipped with dampners, and all necessary starting and regulating devices; a  $7\frac{1}{2}$ -K.W. double current generator, 60 cycles A. C. and arranged for operation as a single phase or two phase machine; a  $7\frac{1}{2}$ -K.W. revolving field alternator, the armature windings of which are wound in sections, the ends of each section being brought out to suitable terminal blocks, and designed to give single, two, three, or six phase currents; a 10 horse power U. S. shunt generator; two 3 horse power bi-polar machines, for use as direct current motors or generators; a  $7\frac{1}{2}$  K.W. three phase induction motor, with three interchangeable rotors, representing the three commercial types, squirrel cage, internal, and external resistance; a starting resistance and controller for the above induction motor; a 10 horse power alternating current series compensated motor with suitable controller; a twenty-light Brush arc lighting dynamo; a 30-ampere mercury rectifier; a 20 K.W. direct current, compound motor; a two-phase, 1 horse power inductor motor, and several small generators and motors. The electrical equipment of shops and heating system are also available for special tests and investigations. The transformer equipment com-



prises types of modern transformers of various sizes; two sets of transformers for two to three phase transformation or vice versa; an auto-transformer of special design, giving a wide range of voltages; a twelve-light constant current transformer, and other transformers for special purposes. The photometer room is large and well ventilated. It contains a Reichsanstalt photometer with a two meter scale, equipped with both Bunsen and Lummer Brodhum screens, and a special integrating arc light photometer. The standards include an amyl acetate lamp with Reichsanstalt certificate and aged incandescent lamps which have been compared with the best available standards. The necessary accessories for exact photometric work, such as lamp holders, spinners, rheostats, etc., are included in the equipment. Cooper Hewitt (Mercury Vapor) lamps, arc lamps of various makes and types, Nernst and other forms of incandescent lamps are used for experimental purposes.

The department possesses a large equipment of wattmeters, alternating and direct current ammeters and voltmeters of various ranges and representative makes.

The calibrating equipment includes a Kelvin Composite Balance, a Weston millivoltmeter with shunts, and a Weston Laboratory Standard Voltmeter with the regulating devices needed for such purposes.

A great variety of integrating wattmeters are used for experimental purposes and synchronizers, water rheostats, two lamp banks, a transformer bank and other accessories are provided for testing work. Two test tables designed to be easily moved from room to room and provided with individual lamp bank resistance, one three-phase test table, one direct current table, and a three-phase induction coil are also included in the laboratory equipment.

The University power plant affords the students an excellent opportunity for making commercial tests. The equipment consists of a 150 K.W. three-phase slow speed unit; a 75 K.W. three-phase direct connected alternator with belted exciter; a 35 K.W. direct current compound generator, direct connected; a 25 K.W. steam turbine exciter unit; a 35 K.W. motor generator set; and a thoroughly modern ten panel switchboard.

#### MECHANICAL ENGINEERING LABORATORY.

The Mechanical Laboratory contains the following apparatus for instructing students in practical experimental engineering: Viscosi-



meters and similar apparatus for testing viscosity and other qualities of lubricating oils; calorimeters for determining dryness and heat of steam; injectors and water meters for measuring water for boiler trials; thermometers and pyrometers for measurement of temperatures; bunte gas burettes and chemical re-agents for tests of chimney flue gases; anemometers for study of heating and ventilation; a Parr calorimeter and an Emerson bomb; calorimeters for the determination of the value of fuels; indicators, reducing motions and planimeters for indicator tests of engines; hydrometers for determinations of specific gravity of liquids; micrometers and extensometers for fine measurements; gauges and manometers for pressures; a Westinghouse Air Brake outfit; a six by nine Sturtevant engine for indicator work; a Rumsey hydraulic ram; a twenty inch centrifugal pump; a three by two by three and one-half duplex steam pump; a four by two by six Cameron pump; a five by three by eight Davidson pump; an eight horse power gas engine; a Wheeler surface condenser, capacity 2,500 pounds of steam per hour. The University power plant and heating system, consisting of four boilers of 600 horse power capacity, a 225 horse power Murry corliss engine, a 125 horse power Chuce engine, a Leyner air compressor, capacity 200 cubic feet per minute; a 50 horse power Harrisburg engine, several blowers and pumps furnish opportunities close at hand for efficiency tests of boilers with different fuels and of the engines at varying loads.

#### WORKSHOP EQUIPMENT.

The forge room occupies a space forty by forty feet. The forge equipment consists of the latest type of Buffalo down-draft forges, each with anvil, providing accommodations for twenty students at each session, and also accessory tools for forging, welding and tool dressing.

The foundry occupies a room forty by forty feet, and contains a Newton cupola furnace, capable of melting two tons of iron per hour, ladles, flasks and all necessary small tools and a stock of patterns.

The forges and cupola are served by three centrifugal fans, which are operated by a ten horse power electric motor.

The machine shop occupies a room forty by eighty feet, and is equipped with iron workers' benches; a large Davis & Eagan planer; a Cincinnati milling machine No. 1½; a power hack saw; a Read speed lathe; a Barnes drill press; a Barnes wet emery grinder; a grindstone; a fourteen inch Lodge & Shapley engine lathe; a fourteen

inch Putnam engine lathe; an eighteen inch Davis & Eagan engine lathe; an eighteen inch Putnam engine lathe; and an eighteen inch Le Blond engine lathe. In one end of the shop is a large tool room, containing a good assortment of small tools and instruments of precision.

The wood shops occupy two rooms on the first floor, each forty by forty feet; each shop has its own tool room, and is well equipped with benches and speed lathes for fitting and turning work.

#### GENERAL ENGINEERING DRAWING.

A large well-lighted room, forty by eighty feet in the Engineering Shops is equipped for courses in Drawing and Descriptive Geometry. It is provided with convenient desks and drawers. The apparatus for instruction and practice consists of over one hundred models, two folding plane frames of special design, a pantograph, a universal drafting machine and numerous special drawing instruments. Besides the usual apparatus of frames, bath, and dark room for sun blue printing, the department has an electric blue printing machine. This machine is of the vertical cylinder type with clock mechanism for lowering the lamp in the cylinder. Its capacity is two prints, size forty-two by forty-four inches, at one exposure. A very serviceable appliance for cutting paper and cloth from rolls consists of a specially designed table. It is provided with rectilinear graduations, and a box at one end for inclosing the roll when the piece to be used has been cut off.

# ENGINEERING COURSES

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## CIVIL ENGINEERING

The work in this department is designed to furnish a thorough course of theoretical instruction, accompanied by practice in the various lines of Civil Engineering. While the course is made practical by giving the student a large amount of practice in the field, the drafting and computing room, and the laboratory, the main object is the development of the mental faculties and judgment of the student.

The general studies and surveying of the first two years lead up to courses in theoretical and applied mechanics, railroads, roads and pavements, hydraulics, graphic statics and engines in the junior year, followed in the senior year by courses in bridge design, design of mill buildings and bins, water supply, sewers, masonry construction, reinforced concrete construction; tunneling and irrigation engineering.

Besides instruction in strictly engineering subjects, courses are given in language, economics, rhetoric, geology, bacteriology, astronomy, and the law of contracts.

Special stress is placed on the field and laboratory work as an aid to the thorough understanding of the theoretical courses. The thesis in the senior year is intended to give the student an opportunity to work out a problem on his own resources and to teach him to be self-reliant.

Numerous inspection trips are made during the junior and senior years, to give the students an opportunity to get in touch with the practical side of engineering work.

## ELECTRICAL ENGINEERING

It is the aim of the department of Electrical Engineering to provide thorough theoretical and practical training for those desirous of engaging in the various applications of electricity to the arts.

Electrical engineering work proper begins in the junior year with courses in electricity and magnetism, theory and method of electrical measurements with direct applications to the theory, design and operation of continuous current apparatus. The theoretical work in alternating currents is begun in the second semester of this year

The senior year is largely devoted to a study of the design and operation of alternating current apparatus, such as generators, transformers, synchronous and induction motors, rotary converters and transformers; distribution and transmission, electric traction and power plant construction and operation, lighting and metering; the telephone and telegraph, and other applications of electricity to the arts.

Opportunity is afforded for special work in electro-chemistry, and the design of apparatus is studied by lectures and solution of problems in the drawing room.

Particular attention is given throughout to the proper correlation of class-room study to laboratory work; to this end courses are given in the testing and handling of the various types of direct and alternating current machinery.

In connection with the work in lighting and illumination, complete tests are made of the various types of electric lamps.

Frequent inspection trips are made to the numerous large power plants in the vicinity, and every opportunity is taken to acquaint the student with the engineering problems of his profession. A senior thesis required for graduation, proves most valuable in developing the students' originality.

## MECHANICAL ENGINEERING

This course is intended to train students along the broad lines of Mechanical Engineering.

In the second year the students are given practical instruction in elementary studies of the kinematics of machinery and of machine design.

In the junior and senior years, the course becomes more strongly differentiated from other engineering courses, and assumes its professional aspect. It includes the theory of machine design, valve-gear movements, applied mechanics of both building structures and moving machinery; thermodynamics, including the study of steam, gasoline and refrigeration engines; the theory of direct current elec-

tricity, and practical instruction in designing specific machines and power plants; shop-work; thorough instruction in the electrical and mechanical laboratories, in efficiency tests of engines, boilers, motors, blowers, pumps, calorimeters, injectors, etc., as well as general tests of boiler feed waters, lubricating oils, cements, flue gases, steam, fuels, steel and iron. Students will also be given instruction in conducting practical duty trials of power plants. The University heating plant is available for this at all times. In the second semester of the senior year, each student is expected to devote considerable time to research in preparing a graduation thesis on some original subject.

### CHEMICAL ENGINEERING

The great development in the United States during the last decade, of chemical and metallurgical industries, such as the manufacture of alkalies, fertilizers, beet sugar, Portland cement, by-products from coal and petroleum, acids from sulphide ores, plate glass, pottery, etc., where a combined knowledge of mechanical engineering and chemistry is needed for competent supervision, has suggested the inauguration of this course. The course in Chemical Engineering is designed to give a major in chemistry and to give fundamental training in engineering. Students taking this course pursue courses in chemistry, physics, mathematics, mechanics and surveying for the first two years; in the junior and senior years, they are given special instruction in designing chemical machinery and in chemical analysis of fuels, gases, steel and iron, electro-metallurgy, etc.

# REQUIREMENTS FOR DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING

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## CIVIL ENGINEERING

### FRESHMAN YEAR

| FIRST SEMESTER  |                |    | SECOND SEMESTER |                |    |
|-----------------|----------------|----|-----------------|----------------|----|
| ALGEBRA         | (Eng. Math. 1) | 3  | ANAL. GEOMETRY  |                |    |
| TRIGONOMETRY    | (Eng. Math. 2) | 2  |                 | (Eng. Math. 3) | 5  |
| CHEMISTRY LECT. | (Chem. 1)      | 3  | CHEMISTRY LECT. | (Chem. 1)      | 3  |
| CHEMISTRY LAB.  | (Chem. 2)      | 2  | CHEMISTRY LAB.  | (Chem. 2)      | 2  |
| GERMAN          | (Eng. Lang. 3) |    | GERMAN          | (Eng. Lang. 4) |    |
| FRENCH          | (Eng. Lang. 5) |    | FRENCH          | (Eng. Lang. 6) |    |
| OR SPANISH      | (Eng. Lang. 7) | 3  | OR SPANISH      | (Eng. Lang. 8) | 3  |
| RHETORIC        | (Eng. Lang. 1) | 2  | RHETORIC        | (Eng. Lang. 2) | 2  |
| DRAWING         | (Draw. 1)      | 3  | DESCRIPT. GEOM. |                |    |
|                 |                | —  |                 | (Draw. 3)      | 3  |
|                 |                | 18 |                 |                | —  |
|                 |                |    |                 |                | 18 |

### SOPHOMORE YEAR

| FIRST SEMESTER |                 |    | SECOND SEMESTER       |                 |    |
|----------------|-----------------|----|-----------------------|-----------------|----|
| DIFF. CALCULUS |                 |    | INT. CALCULUS         | (Eng. Math. 5)  | 5  |
|                | (Eng. Math. 4)  | 5  | PHYSICS               | (Phys. 2 and 4) | 5  |
| PHYSICS        | (Phys. 1 and 3) | 5  | TECHNICAL MECH.       | (C. E. 5a)      | 2  |
| ECONOMICS      | (Econ. 1)       | 3  | TOP. SURVEYING        | (C. E. 2)       | 4  |
| SURVEYING      | (C. E. 1)       | 5  | R. R. CURVES          | (C. E. 3)       | 1  |
|                |                 | —  | ENGINEERING MATERIALS |                 |    |
|                |                 | 18 |                       | (C. E. 18)      | 1  |
|                |                 |    |                       |                 | —  |
|                |                 |    |                       |                 | 18 |



## JUNIOR YEAR

## FIRST SEMESTER

|                        |             |    |
|------------------------|-------------|----|
| TECHNICAL MECH.        | (C. E. 5b)  | 3  |
| APPLIED MECH.          | (C. E. 6)   | 3  |
| INDUSTRIAL ELECTRICITY |             |    |
|                        | (E. E. 9)   | 2  |
| GEOLOGY                | (Geol. 5)   | 3  |
| RAILROADS              | (C. E. 4)   | 5  |
| BACTERIOLOGY           | (C. E. 13a) | 1  |
| ROADS AND PAVEMENTS    |             |    |
|                        | (C. E. 11)  | 1  |
|                        | —           |    |
|                        |             | 18 |

## SECOND SEMESTER

|                       |                |    |
|-----------------------|----------------|----|
| HYDRAULICS            | (C. E. 7)      | 2  |
| HYDRAULIC LAB.        | (C. E. 21)     | 1  |
| APP. MECH. LAB.       | (C. E. 22)     | 1  |
| LEAST SQUARES         |                |    |
|                       | (Eng. Math. 6) | 2  |
| STEAM ENGINES         | (M. E. 3)      | 2  |
| GEOLOGY               | (Geol. 6)      | 3  |
| ALGEBRAIC AND GRAPHIC |                |    |
| STAT.                 | (C. E. 8)      | 3  |
| STRUCTURAL DETAILS    |                |    |
|                       | (C. E. 30)     | 2  |
| ASTRONOMY             | (Phys. 5)      | 2  |
|                       | —              |    |
|                       |                | 18 |

## SENIOR YEAR

## FIRST SEMESTER

|                   |            |    |
|-------------------|------------|----|
| BRIDGE ANALYSIS   | (C. E. 10) | 3  |
| STEEL MILL BLDGS. | (C. E. 12) | 3  |
| WATER SUPPLY      | (C. E. 13) | 3  |
| MASONRY CONST.    | (C. E. 9)  | 5  |
| IRRIGATION ENG.   | (C. E. 15) | 2  |
| WATER POWER       |            |    |
| ENGINEERING       | (C. E. 20) | 2  |
|                   | —          |    |
|                   |            | 18 |

## SECOND SEMESTER

|                       |            |    |
|-----------------------|------------|----|
| BRIDGE DESIGN         | (C. E. 31) | 3  |
| HIGHER STRUCTURES     | (C. E. 16) | 3  |
| ENGINEERING CONTRACTS |            |    |
| AND SPECIFICATIONS    |            |    |
|                       | (C. E. 17) | 2  |
| REINFORCED CONCRETE   |            |    |
| STRUCTURES            | (C. E. 19) | 2  |
| SEWERAGE              | (C. E. 14) | 2  |
| C. E. SEMINAR         | (C. E. 34) | 1  |
| THESIS                |            | 3  |
|                       | —          |    |
|                       |            | 16 |

## ELECTRICAL ENGINEERING

## FRESHMAN YEAR

| FIRST SEMESTER  |                |    | SECOND SEMESTER |                |    |
|-----------------|----------------|----|-----------------|----------------|----|
| ALGEBRA         | (Eng. Math. 1) | 3  | ANAL. GEOMETRY  |                |    |
| TRIGONOMETRY    | (Eng. Math. 2) | 2  |                 | (Eng. Math. 3) | 5  |
| CHEMISTRY LECT. | (Chem. 1)      | 3  | CHEMISTRY LECT. | (Chem. 1)      | 3  |
| CHEMISTRY LAB.  | (Chem. 2)      | 2  | CHEMISTRY LAB.  | (Chem. 2)      | 2  |
| GERMAN          | (Eng. Lang. 3) |    | GERMAN          | (Eng. Lang. 4) |    |
| FRENCH          | (Eng. Lang. 5) |    | FRENCH          | (Eng. Lang. 6) |    |
| OR SPANISH      | (Eng. Lang. 7) | 3  | OR SPANISH      | (Eng. Lang. 8) | 3  |
| RHETORIC        | (Eng. Lang. 1) | 2  | RHETORIC        | (Eng. Lang. 2) | 2  |
| DRAWING         | (Draw. 1)      | 3  | DESCRIPT. GEOM. | (Draw. 3)      | 3  |
|                 |                | —  |                 |                | —  |
|                 |                | 18 |                 |                | 18 |

## SOPHOMORE YEAR

| FIRST SEMESTER |                 |    | SECOND SEMESTER  |                 |    |
|----------------|-----------------|----|------------------|-----------------|----|
| DIFF. CALCULUS |                 |    | INT. CALCULUS    | (Eng. Math. 5)  | 5  |
|                | (Eng. Math. 4)  | 5  | PHYSICS          | (Phys. 2 and 4) | 5  |
| PHYSICS        | (Phys. 1 and 3) | 5  | MACHINE SHOP AND |                 |    |
| FORGING        | (Shop. 2)       | 2  | FOUNDRY          | (Shop 6)        | 3  |
| WOOD SHOP AND  |                 |    | MACH. DRAWING    | (M. E. 31)      | 2  |
| PATTERN MAKING | (Shop 1)        | 3  | ENGINEERING      |                 |    |
| KINEMATICS     | (M. E. 1)       | 2  | MATERIALS        | (C. E. 18)      | 1  |
| MACH. DRAW.    | (M. E. 30)      | 1  | MECHANICS        | (Phys. 6a)      | 2  |
|                |                 | —  |                  |                 | —  |
|                |                 | 18 |                  |                 | 18 |

## JUNIOR YEAR

| FIRST SEMESTER    |            |   | SECOND SEMESTER    |            |   |
|-------------------|------------|---|--------------------|------------|---|
| MECHANICS         | (Phys. 6b) | 3 | APPLIED MECH.      | (C. E. 6)  | 3 |
| STEAM ENGINES AND |            |   | APP. MECH. LAB.    | (C. E. 22) | 1 |
| BOILERS           | (M. E. 2)  | 4 | ECONOMICS          | (Econ. 1)  | 3 |
| DYN. ELEC. MACH.  | (E. E. 1a) | 3 | THERMODYNAMICS     | (M. E. 5)  | 2 |
| ILLUMINATION AND  |            |   | DYN. ELEC. MACH.   | (E. E. 2)  | 3 |
| PHOTOMETRY        | (E. E. 8)  | 2 | PRI. AND SEC. BAT. |            |   |
| THEORY ELEC. AND  |            |   |                    | (E. E. 11) | 1 |
| MAG.              | (Phys. 7)  | 4 | MACH. DESIGN       | (M. E. 32) | 2 |
| ELEC. MEAS.       | (Phys. 8)  | 2 | D. C. LAB.         | (E. E. 21) | 2 |
|                   | —          |   | MECH. LAB.         | (M. E. 21) | 1 |
|                   | 18         |   |                    | —          |   |
|                   |            |   |                    | 18         |   |

## SENIOR YEAR

| FIRST SEMESTER   |            |   | SECOND SEMESTER       |            |   |
|------------------|------------|---|-----------------------|------------|---|
| THEORY OF ALT.   |            |   | A. C. MACH.           | (E. E. 4)  | 3 |
| CURRENTS         | (E. E. 3)  | 4 | SURVEYING             | (C. E. 32) | 2 |
| A. C. LAB.       | (E. E. 22) | 3 | ENGINEERING CONTRACTS |            |   |
| THERMODYNAMICS   | (M. E. 7)  | 2 | AND SPECIFICATIONS    |            |   |
| HYDRAULICS       | (C. E. 7)  | 2 |                       | (C. E. 17) | 2 |
| TELEPHONY AND    |            |   | ELEC. TRAC.           | (E. E. 7)  | 2 |
| TELEGRAPHY       | (E. E. 5)  | 2 | TRANSMISSION AND      |            |   |
| E. E. DESIGN     | (E. E. 31) | 2 | DISTRIBUTION          | (E. E. 6)  | 2 |
| STEAM. ENG. LAB. | (M. E. 22) | 2 | E. E. DESIGN          | (E. E. 32) | 2 |
| E. E. SEMINAR    | (E. E. 12) | 1 | THESIS                |            | 3 |
|                  | —          |   |                       | —          |   |
|                  | 18         |   |                       | 16         |   |

## MECHANICAL ENGINEERING

## FRESHMAN YEAR

| FIRST SEMESTER  |                |   | SECOND SEMESTER |                |   |
|-----------------|----------------|---|-----------------|----------------|---|
| ALGEBRA         | (Eng. Math. 1) | 3 | ANAL. GEOMETRY  |                |   |
| TRIGONOMETRY    | (Eng. Math. 2) | 2 |                 | (Eng. Math. 3) | 5 |
| CHEMISTRY LECT. | (Chem. 1)      | 3 | CHEMISTRY LECT. | (Chem. 1)      | 3 |
| CHEMISTRY LAB.  | (Chem. 2)      | 2 | CHEMISTRY LAB.  | (Chem. 2)      | 2 |
| GERMAN          | (Eng. Lang. 3) |   | GERMAN          | (Eng. Lang. 4) |   |
| FRENCH          | (Eng. Lang. 5) |   | FRENCH          | (Eng. Lang. 6) |   |
| OR SPANISH      | (Eng. Lang. 7) | 3 | OR SPANISH      | (Eng. Lang. 8) | 3 |
| RHETORIC        | (Eng. Lang. 1) | 2 | RHETORIC        | (Eng. Lang. 2) | 2 |
| DRAWING         | (Draw. 1)      | 3 | DESCRIPT. GEOM. | (Draw. 3)      | 3 |
| —               |                |   | —               |                |   |
| 18              |                |   | 18              |                |   |

## SOPHOMORE YEAR

| FIRST SEMESTER |                 |   | SECOND SEMESTER       |                 |   |
|----------------|-----------------|---|-----------------------|-----------------|---|
| DIFF. CALCULUS |                 |   | INT. CALCULUS         | (Eng. Math. 5)  | 5 |
|                | (Eng. Math. 4)  | 5 | PHYSICS               | (Phys. 2 and 4) | 5 |
| PHYSICS        | (Phys. 1 and 3) | 5 | FOUNDRY               | (Shop 5)        | 2 |
| WOOD SHOP AND  |                 |   | PATTERN MAKING        | (Shop 3)        | 1 |
| PATTERN MAKING | (Shop 1)        | 3 | MACH. DRAWING         | (M. E. 31)      | 2 |
| FORGING        | (Shop 2)        | 2 | TECHNICAL MECH.       | (C. E. 5a)      | 2 |
| KINEMATICS     | (M. E. 1)       | 2 | ENGINEERING MATERIALS |                 |   |
| MACH. DRAWING  | (M. E. 30)      | 1 |                       | (C. E. 18)      | 1 |
| —              |                 |   | —                     |                 |   |
| 18             |                 |   | 18                    |                 |   |

## JUNIOR YEAR

| FIRST SEMESTER    |            |   | SECOND SEMESTER  |            |    |
|-------------------|------------|---|------------------|------------|----|
| TECHNICAL MECH.   | (C. E. 5b) | 3 | HYDRAULICS       | (C. E. 7)  | 2  |
| APPLIED MECHANICS | (C. E. 6)  | 3 | APP. MECH. LAB.  | (C. E. 22) | 1  |
| STEAM ENGINES AND |            |   | THERMODYNAMICS   | (M. E. 5)  | 2  |
| BOILERS           | (M. E. 2)  | 4 | ELECTRICAL MACH. | (E. E. 10) | 2  |
| DYN. ELEC. MACH.  | (E. E. 1b) | 2 | E. E. LAB.       | (E. E. 24) | 2  |
| MACH. DESIGN      | (M. E. 32) | 3 | ECONOMICS        | (Econ. 1)  | 3  |
| MACHINE SHOP      | (Shop 6)   | 3 | MACH. DESIGN     | (M. E. 33) | 3  |
|                   | —          |   | MECH. LAB.       | (M. E. 21) | 1  |
|                   | 18         |   | HEAT AND VENT    | (M. E. 6)  | 2  |
|                   |            |   |                  | —          |    |
|                   |            |   |                  |            | 18 |

## SENIOR YEAR

| FIRST SEMESTER         |            |   | SECOND SEMESTER       |            |    |
|------------------------|------------|---|-----------------------|------------|----|
| THERMODYNAMICS         | (M. E. 7)  | 2 | STEAM TURBINES        | (M. E. 14) | 2  |
| STEAM ENG. DESIGN      |            |   | ENGINEERING CONTRACTS |            |    |
|                        | (M. E. 34) | 4 | AND SPECIFICATIONS    |            |    |
| GAS ENGINES            | (M. E. 8)  | 1 |                       | (C. E. 17) | 2  |
| STEAM ENG. LAB.        | (M. E. 22) | 2 | POWER PLANT DESIGN    |            |    |
| HYDRAULIC MACH.        | (M. E. 9)  | 2 |                       | (M. E. 35) | 2  |
| VALVE GEARS            | (M. E. 11) | 1 | M. E. LAB.            | (M. E. 23) | 2  |
| M. E. SEMINAR AND      |            |   | RAILWAY MECH.         |            |    |
| PROBLEMS               | (M. E. 12) | 2 | ENGINEERING           | (M. E. 15) | 2  |
| SHOP ECONOMICS         | (M. E. 10) | 2 | COMPRESSED AIR        | (M. E. 16) | 1  |
| STRUCTURAL ENGINEERING |            |   | SURVEYING             | (C. E. 32) | 2  |
|                        | (C. E. 33) | 2 | THESIS                |            | 3  |
|                        | —          |   |                       | —          |    |
|                        | 18         |   |                       |            | 16 |

## CHEMICAL ENGINEERING

## FRESHMAN YEAR

## FIRST SEMESTER

|                 |                |   |
|-----------------|----------------|---|
| ALGEBRA         | (Eng. Math. 1) | 3 |
| TRIGONOMETRY    | (Eng. Math. 2) | 2 |
| CHEMISTRY LECT. | (Chem. 1)      | 3 |
| QUAL. ANALYSIS  | (Chem. 3)      | 2 |
| GERMAN          | (Eng. Lang. 3) |   |
| FRENCH          | (Eng. Lang. 5) |   |
| OR SPANISH      | (Eng. Lang. 7) | 3 |
| RHETORIC        | (Eng. Lang. 1) | 2 |
| DRAWING         | (Draw. 1)      | 3 |

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18

## SECOND SEMESTER

|                 |                |   |
|-----------------|----------------|---|
| ANAL. GEOMETRY  | (Eng. Math. 3) | 5 |
| CHEMISTRY LECT. | (Chem. 1)      | 3 |
| QUAL. ANALYSIS  | (Chem. 4)      | 2 |
| GERMAN          | (Eng. Lang. 4) |   |
| FRENCH          | (Eng. Lang. 6) |   |
| OR SPANISH      | (Eng. Lang. 8) | 3 |
| RHETORIC        | (Eng. Lang. 2) | 2 |
| DESCRIPT. GEOM. | (Draw. 3)      | 3 |

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18

## SOPHOMORE YEAR

## FIRST SEMESTER

|                 |                   |   |
|-----------------|-------------------|---|
| DIFF. CALCULUS  | (Eng. Math. 4)    | 5 |
| PHYSICS         | (Phys. 1 and 3)   | 5 |
| QUANT. ANALYSIS | (Chem. 5a and 5b) | 5 |
| KINEMATICS      | (M. E. 1)         | 2 |
| MACH. DRAWING   | (M. E. 30)        | 1 |

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18

## SECOND SEMESTER

|                 |                   |   |
|-----------------|-------------------|---|
| INT. CALCULUS   | (Eng. Math. 5)    | 5 |
| PHYSICS         | (Phys. 2 and 4)   | 5 |
| QUANT. ANALYSIS | (Chem. 6a and 6b) | 2 |
| TECHNICAL MECH. | (C. E. 5a)        | 2 |
| SURVEYING       | (C. E. 32)        | 2 |
| MACH. DRAWING   | (M. E. 31)        | 2 |

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18



## JUNIOR YEAR

## FIRST SEMESTER

|                              |            |    |
|------------------------------|------------|----|
| TECHNICAL MECH.              | (C. E. 5b) | 3  |
| STEAM ENGINES AND<br>BOILERS | (M. E. 2)  | 4  |
| ORGANIC CHEM. LECT.          | (Chem. 12) | 4  |
| PHYS. CHEM. LECT.            | (Chem. 17) | 3  |
| MACH. DESIGN                 | (M. E. 32) | 4  |
|                              | —          | 18 |

## SECOND SEMESTER

|                                      |            |   |
|--------------------------------------|------------|---|
| HYDRAULICS                           | (C. E. 7)  | 2 |
| APPLIED MECH.                        | (C. E. 6)  | 3 |
| APP. MECH. LAB.                      | (C. E. 22) | 1 |
| THERMODYNAMICS                       | (M. E. 7)  | 2 |
| MECH. LAB. INCLUDING<br>GAS ANALYSIS |            | 2 |
| ORGANIC PREPARATIONS                 | (Chem. 14) | 3 |
| ELECTRO-CHEM. LECT.                  | (Chem. 19) | 2 |
| ECONOMICS                            | (Econ. 1)  | 3 |

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18

## SENIOR YEAR

## FIRST SEMESTER

|                                     |                   |   |
|-------------------------------------|-------------------|---|
| THERMODYNAMICS                      | (M. E. 7)         | 2 |
| STEAM ENGINE LAB.                   | (M. E. 22)        | 2 |
| DYN. ELEC. MACH.                    | (E. E. 1b)        | 2 |
| STRUCTURAL ENG.                     | (C. E. 33)        | 2 |
| GAS ENGINES                         | (M. E. 13)        | 1 |
| PHYSICAL AND ELECTRO-<br>CHEM. LAB. | (Chem. 18 and 21) | 2 |
| ECONOMIC GEOL.                      | (Geol. 5)         | 3 |
| ASSAYING                            | (Geol. 11)        | 2 |
| THESIS                              |                   | 2 |

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18

## SECOND SEMESTER

|                                             |            |   |
|---------------------------------------------|------------|---|
| ELECTRICAL MACH.                            | (E. E. 10) | 2 |
| M. E. LAB.                                  | (M. E. 23) | 1 |
| E. E. LAB.                                  | (E. E. 24) | 2 |
| INDUSTRIAL CHEM.                            | (Chem. 24) | 2 |
| ORE ANALYSIS                                | (Chem. 10) | 3 |
| GEOL. MATERIALS                             | (Geol. 11) | 3 |
| ENGINEERING CONTRACTS<br>AND SPECIFICATIONS | (C. E. 17) | 2 |

THESIS 1

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16

# DESCRIPTION OF COURSES OF STUDY

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## CIVIL ENGINEERING

### 1. SURVEYING. *First semester.* 5 h.

Instruction is given in the theory of surveying and in the theory, use, and adjustment of the compass, level, transit, plane table and sextant. The field work includes pacing and chaining surveys; compass and transit traverses; measurement of angles by repetition; differential, profile, and contour leveling; traverses with the plane-table, etc. Maps and reports are required.

Considerable time is given to a study of U. S. Land Survey methods, and to court decisions relating to relocation of corners, lines and boundaries.

Text-books: Pence and Ketchum's Surveying Manual; Allen's Field and Office Tables.

Prerequisites: Eng. Math. 1 and 2, and Drawing 1.

### 2. TOPOGRAPHIC SURVEYING. *Second semester.* 4 h.

In this course the theory and use of the stadia, the aneroid barometer, base line apparatus, and other instruments used in topographic surveys are studied, and the different methods of making topographic surveys are discussed. A complete topographic survey based on a carefully designed triangulation system is made; the angles are measured by repetition, and base lines are measured with precision. The calculations are made and a map is drawn. A survey is made of a city block, and complete surveys are made of a city street and a mining claim. Considerable time is devoted to topographic drawing.

Text-books: Pence and Ketchum's Surveying Manual; Wilson's Topographic Surveying; and Notes by the Department.

Prerequisite: C. E. I.

3. RAILROAD CURVES. *Second semester. 1 h.*

A study is made of simple and compound curves. Instruction consists of recitations, problems, and field locations.

Text-books: Allen's Railroad Curves and Earthwork.

Prerequisites: C. E. 1, and to be taken with C. E. 2.

4. RAILROAD ENGINEERING. *First semester. 5 h.*

Instruction in Railroad Engineering consists of field practice, office and class-room work.

Field practice consists of the complete location of a line of railroad, including reconnaissance, preliminary, paper location, final location, and cross-sectioning.

In the office the quantities are calculated and profiles and a complete map are drawn.

In the class-room a detailed study is made of the principles of economic location and construction, maintenance of way, and railway structures and appliances.

Text-books: Webb's Economics of Railroad Construction; Tratman's Track and Track Work; Talbot's Railway Transition Spiral.

Prerequisites: C. E. 1, 2, and 3.

5a. TECHNICAL MECHANICS. *Second semester. 2 h.*

The mechanics of engineering rather than of astronomy and physics is here considered. Particular attention is given to developing and fixing fundamental concepts of equilibrium and motion as applied to engineering problems. Both algebraic and graphic methods of the calculation of problems are considered. This course is followed in the first semester of the junior year by Technical Mechanics 5b.

Text-book: Maurer's Technical Mechanics.

Prerequisites: Eng. Math. 4, and registration in Eng. Math. 5.

5b. TECHNICAL MECHANICS. *First semester. 3 h.*

A continuation of C. E. 5a.

Text-book: Maurer's Technical Mechanics.

Prerequisites: Eng. Math. 5, and C. E. 5a.

6. APPLIED MECHANICS. *First and second semesters. 3 h.*

Recitations, problems, and lectures.

The following subjects are taken up: elasticity of materials; stress and strain; working stresses; resistance of pipes and

riveted joints; bending moment; resisting moment; shear; elastic curve of beams; torsion; internal stress; fatigue of metals, etc. Some time is given to the quality and requirements of engineering materials.

Text-book: Merriman's *Mechanics of Materials*.

Prerequisites: Eng. Math. 4 and 5, and Physics 6 or C. E. 5.

7. **HYDRAULICS.** *First and second semesters.* 2 h.

Recitations, problems, and lectures.

The following subjects are taken up: weight and pressure of water; head; center of pressure; velocity and discharge through orifices, tubes, nozzles, pipes, hose, weirs, conduits, canals, rivers; meters and measurements; motors, turbines, and water wheels; water power.

Text-books: Hoskin's *Hydraulics*.

Prerequisites: Eng. Math. 4 and 5, and Physics 6 or C. E. 5, and C. E. 6.

8. **ALGEBRAIC AND GRAPHIC STATICS.** *Second semester.* 3 h.

The elements of statics by algebraic and graphic methods, and stresses in simple roof trusses and bridges.

Text-book: Ketchum's *Design of Steel Mill Buildings*.

Prerequisites: C. E. 5 and 6.

9. **MASONRY CONSTRUCTION.** *First semester.* 5 h.

A study of cements, concrete, retaining walls, dams, arches, and other masonry and reinforced concrete structures. A complete investigation of a reinforced concrete arch is made, using the elastic theory. Some time is given to testing cements, brick, stone, and reinforced concrete.

Text-books: Taylor and Thompson's *Concrete, Plain and Reinforced*, and Baker's *Masonry Construction*.

Prerequisites: C. E. 5, 6, and 8.

10. **BRIDGE ANALYSIS.** *First semester.* 3 h.

This course includes the calculations of stresses in bridges and girders loaded with uniform and concentrated loads, by algebraic and graphic methods; stresses in portals, pins, and other details preliminary to bridge design. Each student calculates the stresses in and investigates the efficiencies of the members of a highway bridge.

Text-book: Ketchum's *Design of Highway Bridges*.

Prerequisites: C. E. 8 and 30.

11. ROADS AND PAVEMENTS. *First semester (first half)*. 1 h.

A detailed study of country roads and city pavements, together with a study of road building materials.

Text-book: Baker's Roads and Pavements.

Prerequisites: C. E. 1, 2, 3, and 5a.

12. STEEL MILL BUILDINGS. *First semester*. 3 h.

A study of steel mill buildings, mine structures, grain elevators, ore bins, retaining walls, etc.

Text-books: Ketchum's Design of Steel Mill Buildings; Ketchum's Design of Walls, Bins, and Grain Elevators.

Prerequisites: C. E. 8 and 30, and to be taken with C. E. 10.

13. WATER SUPPLY. *First semester*. 3 h.

The principle features of water works design and construction, including quantity and quality of potable water; choice of supply; the designing of distribution systems, reservoirs, dams and elevated tanks.

Text-book: Turneaure and Russell's Public Water Supplies.

Prerequisites: C. E. 7 and 13a.

13a. BACTERIOLOGY. *First semester (second half)*. 1 h.

Lectures and laboratory demonstration.

Bacteriological methods and their application in water analysis and sewerage.

Prerequisites: Chemistry 1 and 2, and Physics 1 to 4.

14. SEWERAGE. *Second semester*. 2 h.

The design and construction of sewerage systems, including separate and combined systems; surveys and plans; determination of size and capacity; construction; and modern methods of sewage disposal.

Text-book: Folwell's Sewerage, and Notes.

Prerequisites: C. E. 7 and 13.

15. IRRIGATION ENGINEERING. *First semester*. 2 h.

In this course a study is made of the fundamental principles of irrigation engineering, including the design and construction of reservoirs, dams, flumes, canals, and other irrigation works.

Text-book: Wilson's Irrigation Engineering.

Prerequisites: C. E. 7 and 8, and to be taken with C. E. 13.

16. HIGHER STRUCTURES. *Second semester.* 3 h.

The calculation of stresses in swing bridges, suspension bridges, arch bridges, and cantilever bridges, office building frames, and other statically indeterminate structures.

Text-book: Johnson, Bryan and Turneure's Framed Structures, Part III, and notes.

Prerequisites: C. E. 10 and 12, and to be taken with C. E. 30.

17. ENGINEERING CONTRACTS AND SPECIFICATIONS.—*Second semester.* 2 h.

The law of engineering contracts and specifications. Emphasis is placed on the importance of the clear and definite writing of contracts and specifications, and considerable practice is given the student in the preparation of contracts and specifications.

Text-book: Tucker's Contracts in Engineering.

Prerequisites: For senior students only.

18. ENGINEERING MATERIALS. *Second semester.* 1 h.

A study is made of the properties and requirements for materials used in engineering construction, the effect of different methods of manufacture upon the quality of the material, and specifications and standard tests for materials.

Prerequisites: Eng. Math. 3 and Physics 1.

19. REINFORCED CONCRETE STRUCTURES. *Second semester.* 2 h.

A study is made of the theory of reinforced concrete, and the design of reinforced concrete structures.

Text-books: Turneure and Maurer's Reinforced Concrete; Ketchum's Design of Walls, Bins, and Grain Elevators, and references.

Prerequisites: C. E. 9, 10, and 12.

20. WATER POWER ENGINEERING. *First semester.* 2 h.

Stream flow including hydrographs of actual streams; impulse wheels and reaction turbines and the conditions governing their selection; storage and the relation of the reservoir to the power station; economics of power development, its sale and distribution.

Text-book: Mead's Water Power Engineering.

Prerequisites: C. E. 4, 7, and 8, and registration in C. E. 9.



21. HYDRAULIC LABORATORY. *Second semester.* 1 h.

Experiments on flow of water over weirs, through orifices in open channels and pipes; test of pumps; reaction and turbine water wheels, etc.; determination of coefficients of friction in hose and pipes.

Prerequisites: C. E. 5 and 6, registration in C. E. 7.

22. APPLIED MECHANICS LABORATORY. *Second semester.* 1 h.

Experiments on strength of steel, wrought and cast iron; shear on rivets; strength of wood; and tensile and compressive strength of Portland cement, brick and building stone.

Prerequisite: To be taken with C. E. 6.

30. STRUCTURAL DETAILS. *Second semester.* 2 h.

The student traces the shop drawings of a highway bridge; details beams, columns and connections, and calculates the weight of a highway bridge.

Text-book: Ketchum's Design of Highway Bridges.

Prerequisite: To be taken with C. E. 8.

31. BRIDGE DESIGN. *Second semester.* 3 h.

The detailed design of a railway truss bridge and a railway plate girder, including the making of complete detail drawings and an estimate of weight and cost. A study is made of swing, cantilever, suspension, arch, and movable bridges.

Text-books: Merriman and Jacoby's Bridges, Part III, and Ketchum's Notes on Bridge Design.

Prerequisite: C. E. 10.

32. ELEMENTARY SURVEYING. *Second semester.* 2 h.

A brief course in surveying and in the theory and use of the level, transit and other instruments for electrical, mechanical and chemical engineering students. The work covers problems in pacing, chaining, compass and transit surveys, profile and contour leveling, laying out buildings, etc.

Text-book: Pence and Ketchum's Surveying Manual.

Prerequisites: Eng. Math. 1, 2, and 3, Draw. 1, and Physics 1 and 2.

33. STRUCTURAL ENGINEERING. *First semester.* 2 h.

This course includes the elements of statics by algebraic and graphic methods, the calculation of stresses in roof trusses, and the design of shops and mill buildings.

Text-book: Ketchum's Design of Steel Mill Buildings.

Prerequisite: C. E. 6.

34. C. E. SEMINAR. *Second semester. 1 h.*

A study is made of technical periodicals and literature.

Prerequisites: C. E. 9, 10, and 13.

For Graduate Courses see page 148 under "Graduate School."

## ELECTRICAL ENGINEERING

1a. DYNAMO ELECTRICAL MACHINERY. *First semester. 3 h.*

A study of the theory of electricity and magnetism, and the magnetic properties of iron and steel; the theory, construction and operation of direct current generators and motors.

Text-book: Elements of Electrical Engineering by Franklin and Esty. The work is supplemented by practical problems throughout the course.

Prerequisites: Physics 3 and 4, and to be taken with Physics 6b and 7.

1b. DYNAMO ELECTRIC MACHINERY. *First semester. 2 h.*

A study of the theory of Electricity and Magnetism, and the magnetic properties of iron and steel; the theory, construction and operation of the direct current generators and motors.

Text-book: Elements of Electrical Engineering by Franklin and Esty. The work is supplemented by practical problems throughout the course.

Prerequisites: Physics 3 and 4, and to be taken with C. E. 5b.

2. DYNAMO ELECTRICAL MACHINERY. *Second semester. 3 h.*

Continuation of course 1a.

3. THEORY OF ALTERNATING CURRENTS. *First semester. 4 h.*

A course in the mathematical theory of alternating currents and alternating phenomena and methods of measurement. Inductance, capacity, impedance, etc.

Text-book: Franklin and Williamson's Alternating Currents.

Prerequisites: E. E. 2, 8, and 21, and Physics 7 and 8.

4. ALTERNATING CURRENT MACHINERY. *Second semester. 3 h.*

Theory, regulation, testing and operation of various kinds of alternating current apparatus, single and polyphase generators, synchronous and induction motors, rotary converters, etc.

Prerequisite: E. E. 3.

5. TELEPHONY AND TELEGRAPHY. *First semester. 2 h.*

The theory of the telephone; land, submarine and wireless telegraphy; telephone and telegraph instruments and systems, and engineering problems.

Text-book: Miller's American Telephone Practice.

Prerequisites: E. E. 1a, 2 and 21, and to be taken with E. E. 3.

6. TRANSMISSION AND DISTRIBUTION. *Second semester. 2 h.*

A study of the principles of direct and alternating current distribution for light and power purposes; methods of installation and regulation, illustrated by practical application to specific problems; applications to alternating problems in long distance transmission. Lectures and problems.

Prerequisites: E. E. 1a, 2, and 3, and to be taken with E. E. 4.

7. ELECTRIC TRACTION. *Second semester. 2 h.*

Principles of the design and installation of electric railway systems, storage battery installations, distribution systems: surface, overhead, underground railways, applications to direct and alternating current systems.

Prerequisites: E. E. 1a, 2, and 3, and to be taken with E. E. 4.

8. ILLUMINATION AND PHOTOMETRY. *First semester. 2 h.*

A study of illuminants with respect to their adaptation to interior and exterior lighting and methods of determining the amount, character, and distribution of their light flux. Familiarity with the practice of photometry is gained through laboratory work in connection with this course.

Prerequisites: to be taken with E. E. 1a.

9. INDUSTRIAL ELECTRICITY. *First semester. 2 h.*

A brief course designed especially for students in other departments to acquaint them with the general principles and applications of electricity and electrical machinery.

Prerequisites: Physics 1 to 4.

10. ELECTRICAL MACHINERY. *Second semester. 2 h.*

A course designed especially for students in Mechanical and Chemical Engineering departments, some attention being given

near the end of the course to the simpler principles of alternating currents and alternating current machinery.

Prerequisites: E. E. 1b.

11. PRIMARY AND SECONDARY BATTERIES. *Second semester.* 1 h.

A course devoted primarily to the study of storage batteries, their use, maintenance, and care, and their application to central station work and power distribution.

Prerequisites: E. E. 1a, and to be taken with E. E. 2.

12. E. E. SEMINAR. *First semester.* 1 h.

A course in the history of Electrical Engineering and the biography of prominent engineers; also reviews of current electrical literature.

Prerequisites: E. E. 1a and 2, and to be taken with E. E. 3.

21. DIRECT CURRENT LABORATORY. *Second semester.* 2 h.

Experimental study of the characteristics of direct current generators and motors; methods of testing, commercial tests, etc.

Prerequisites: E. E. 1a, and to be taken with E. E. 2.

22. ALTERNATING CURRENT LABORATORY. *First semester.* 3 h.

Experimental study of the properties and performance of alternating current generators, motors, transformers, rotary converters; methods of alternating current measurements and commercial tests.

Prerequisite: To be taken with E. E. 3.

24. ELECTRICAL LABORATORY. *Second semester.* 2 h.

A laboratory course in direct and alternating current machinery, testing and operation.

Prerequisites: E. E. 1b, to be taken with E. E. 10.

31. ELECTRICAL ENGINEERING DESIGN. *First semester.* 2 h.

Principles of design of direct and alternating current apparatus.

Lectures, problems, drawing.

Prerequisites: E. E. 1a and 2, and to be taken with E. E. 3.

32. ELECTRICAL ENGINEERING DESIGN. *Second semester.* 2 h.

Continuation of course 31.

Prerequisite: E. E. 3, and to be taken with E. E. 4.

For Graduate Courses see page 148 under "Graduate School."

## MECHANICAL ENGINEERING

1. KINEMATICS. *First semester. 2 h.*

A study of the relative motions of the parts of machines, instant centers, velocities, gearing and wrapping connectors.

Prerequisites: Physics 1 and 3.

Text-book: Barr's Kinematics.

2. STEAM ENGINES AND BOILERS. *First semester. 4 h.*

Lectures and recitations.

In this course the various types of boilers and engines are studied as well as their construction and operation. Power plant equipment, such as pumps, condensers, piping, pipe covering, steam traps, is taken up.

Text-book: Hutton's Mechanical Engineering of Power Plants.

Prerequisites: Physics 1 to 4.

3. STEAM ENGINES AND BOILERS. *Second semester. 2 h.*

This is a course in boilers and steam engines for civil engineering students.

Text-book: Hutton's Mechanical Engineering of Power Plants.

Prerequisites: C. E. 5 and 6.

5. THERMODYNAMICS. *Second semester. 2 h.*

Mechanical theory of heat, laws of transformation, perfect gases, saturated and superheated vapors, various cycles, heat and refrigeration engines.

Prerequisites: Physics 1 to 4, M. E. 3; Phys. 6, or C. E. 5.

6. HEATING AND VENTILATION. *Second semester. 2 h.*

A course of lectures is given on this subject in connection with some acceptable text. The different methods of heating and ventilating are investigated with a view to determining their efficiency and economy. The matter of favorable scientific conditions as affected by heating and ventilating is given careful consideration. As a part of the course each student is required to design a system of heating for a given building by some standard method. He also prepares the necessary specifications and contracts and makes out bills of materials.

Text-book: Carpenter's Heating and Ventilating of Buildings.

Prerequisites: M. E. 1 and 2.



7. THERMODYNAMICS. *First semester.* 2 h.

Lectures, recitations and problems.

The study of the chemical and calorific qualities of coal, coke, petroleum, natural gas, gasoline, and producer gas; the design of various types of boilers, stokers, grates, feed water heaters, purifiers and economizers, condensers, artificial and natural draught, steam and gas engines, and turbines.

Prerequisites: M. E. 2 and 5.

8. GAS ENGINES. *First semester.* 1 h.

The purpose of this course is to acquaint the student with the construction and operation of gas engines and producer gas plants.

Text-book: Hutton's Gas Engines.

Prerequisite: M. E. 5.

9. HYDRAULIC MACHINERY. *First semester.* 2 h.

This course makes application of the principles of the dynamics of fluids to the various turbines and other water wheels in general use. Cranes, hoists, engines and other appliances using water are discussed. The efficiency of water as compared with steam, electricity or air under different conditions, is considered.

Text-books: Blaine's Hydraulic Machinery; Barr's Pumping Machinery.

Prerequisites: C. E. 7, and M. E. 2.

10. SHOP ECONOMICS. *First semester.* 2 h.

This course of lectures will cover matters relating to the economical design and management of manufacturing property; the capitalization and organization of companies; the organization of labor; the calculation of cost; transmission of power; and sanitation.

Prerequisites: M. E. 2 and 32.

11. VALVE GEARS. *First semester.* 1 h.

In this course a theoretical and practical study of valve gears and link motions is made. A thorough investigation is made of the various kinds of valves and link motions occurring in the different types of engines and pumps.

Text-book: Halsey's Slide Valve Gears.

Prerequisite: M. E. 2.



12. MECHANICAL ENGINEERING SEMINAR AND PROBLEMS. *Second semester.* 2 h.

This course takes up the review and study of the literature bearing on mechanical engineering. A series of problems is given for the student to solve and report on, similar to those an engineer would meet in every-day practice.

Prerequisites: M. E. 1, 2, 5, and 6.

14. STEAM TURBINES. *Second semester.* 2 h.

A study of the principles of the design, installation and management of steam turbine power plants.

Prerequisites: M. E. 2 and 5.

15. RAILWAY MECHANICAL ENGINEERING. *Second semester.* 2 h.

The purpose of this course is to give familiarity with the working parts and details of locomotives and railway equipment. Special attention will be given to types, properties, weight on driver, etc. The management and repair of locomotives will also be considered. Railway signals, air brakes, car heating and lighting will be treated.

Text-book: McShane's Locomotive Up To Date.

Prerequisites: M. E. 2 and 5.

16. COMPRESSED AIR. *Second semester.* 1 h.

A study of air compressors; the transmission of compressed air and its application to pneumatic machinery.

Text-book: Peele's Compressed Air.

Prerequisite: M. E. 5.

21. MECHANICAL LABORATORY. *Second semester.* 1 h.

Experimental work in calibration of planimeters, water meters and gages; tests of dryness and quality of steam; tests of acidity, specific gravity, chilling and flashing points, and viscosity of oils and other lubricating materials; of impurities in boiler feed water; of flow of air with anemometers and draught gages, etc.

Text-book: Carpenter's Experimental Engineering is used as a reference.

Prerequisite: M. E. 2.

22. STEAM ENGINE LABORATORY. *First semester.* 2 h.

Tests of boiler flue gases and combustion of fuels; of efficiency

of injectors, engines and boilers; commercial tests of heating and power plants.

Prerequisites: M. E. 2 and 5.

23. MECHANICAL LABORATORY. *Second semester.* 2 h.

Advanced work in engine testing involving a study of entropy; tests in heating and ventilating.

Prerequisites: M. E. 7 and 21.

30. MACHINE DRAWING. *First semester.* 1 h.

Lectures and a study of commercial drawings familiarize the student with current practice in Machine Drawing. In addition the most elementary design of machine parts will be taken up.

Prerequisite: registration in M. E. 1.

31. MACHINE DRAWING. *Second semester.* 2 h.

Drawing from models and sketches. Design of machine elements and kinematic drawings of complete machines.

Prerequisites: M. E. 1 and 30, and registration in C. E. 18.

32. MACHINE DESIGN. *First semester.* 3 h.

Lectures and drawing.

A study of the design of machines from the theoretical and practical standpoints; kinematic relation of parts, strength, rigidity and ease, and cheapness of construction.

Prerequisites: M. E. 1, and C. E. 18.

33. MACHINE DESIGN. *Second semester.* 3 h.

Each student will design some complete machine. Assembly and detail drawings, bill of material, weights and estimate of cost will be required.

Prerequisites: M. E. 1, 30, 31, 32, and C. E. 5a, 5b, and 6.

34. STEAM ENGINE DESIGN. *First semester.* 3 h.

Recitations and problems.

A study of the practical and theoretical design of simple, compound and triple expansion steam engines.

Prerequisites: M. E. 2, 5 and 33.

35. POWER PLANT DESIGN. *Second semester.* 2 h.

This course is supplemental to the course on power plant

equipment, and is intended to give students actual experience in computing the requirements of power plants, and making construction drawings for the same.

Prerequisites: M. E. 7 and 34.

For Graduate Courses see page 149 under "Graduate School."

## SHOP WORK

In connection with the shopwork a course of reading is mapped out covering the construction, care and use of the tools and machinery with which the student is working. Written quizzes on this work will be required as near the end of each month as the schedule will permit.

1. WOODWORKING. *First semester. Three periods per week of three hours each. 3 h.*

The use of all ordinary wood-working tools in a series of graded exercises, including the use of speed lathe and turning tools. One-third of time is given to pattern making.

2. FORGING. *First semester. Two periods per week of three hours each. 2 h.*

Occasional lectures and practical work in the forging and welding of iron and steel, tool dressing, tempering, case hardening, and annealing. Each student makes a set of lathe tools and cold chisels to be used later in the machine shop.

3. PATTERN MAKING. *Second semester. One period per week of three hours each. 1 h.*

Making patterns for irons and brass castings with allowances for draft and shrinkage and finish.

Prerequisite: Shop 1.

4. FOUNDRY. *Second semester. Two periods per week of three hours each. 2 h.*

Practical work in the making of moulds and cores; the care and operation of the cupola furnace and the brass furnace; mixing of metals; and the study of the properties of alloys.

5. MACHINE SHOP. *First semester. Three periods per week of three hours each. 3 h.*

Practical work in chipping and filing of iron, steel, brass, and other metals; the working of metals in lathe, planer and drill

press; repair of broken machinery and construction of machines and machine parts.

Prerequisites: Shop 1, 2, and 3.

6. MACHINE SHOP AND FOUNDRY. *Second semester. Three periods per week of three hours each. 3 h.*

This course is for Electrical Engineering students. The time is divided between machine shop and foundry.

Prerequisites: Shop 1 and 2.

### GENERAL ENGINEERING DRAWING

1. MECHANICAL DRAWING. *First semester. 3 h.*

Use of instruments; drawing of geometric figures in isometric, cabinet and orthographic projections. Shading is taught for a two-fold object, viz.: effect on the drawing, and preparation for Descriptive Geometry. Considerable attention is given to lettering.

Text-books: Tracy's Mechanical Drawing, and Reinhardt's Lettering.

2. MECHANICAL DRAWING. *Second semester. 2 h.*

A continuation of Mechanical Drawing for first semester. The course is arranged especially for the Civil Engineering students, and includes sketching from models, taking dimensions for scaled drawings, topographic drawings and mapping.

Text-book: Reinhardt's Technic of Mechanical Drawing.

3. DESCRIPTIVE GEOMETRY. *Second semester. 3 h.*

The course covers the orthographic projection of points, lines, planes, warped surfaces, etc., in the four angles of projection. Care is exercised to train the student to handle the figures in space rather than on the drawing, at the same time securing correct execution of the drawing.

Text-book: Phillips and Millar's Descriptive Geometry.

Prerequisite: Draw. 1.

4. FREE-HAND DRAWING. *First semester. 2 h. Open to students in all departments.*

A course which includes lectures on the principles of free-hand perspective, practice drawing from models and casts, and assigned reading.

## ENGINEERING MATHEMATICS

1. ALGEBRA. *First semester.* 3 h.

On account of the differences in preparation of students entering from widely separated high schools, the course begins with a review of surds and imaginaries, quadratic equations, and logarithms. This review is completed by the time logarithms are needed in trigonometry. After this follows a thorough drill in the algebraic principles that the students will need in analytic geometry, calculus and in the applications to practical engineering. Particular emphasis is placed on graphic methods.

Text-book: Rietz and Crathorne's College Algebra.

2. TRIGONOMETRY. *First semester.* 2 h.

This is in the main a conventional course in trigonometry. Considerable attention is given to graphic methods. A knowledge of logarithms is assumed. At the beginning of the semester an examination covering plane trigonometry and the right spherical triangle will be given for those who desire advanced standing in the course.

Text-book: Phillips and Strong's Plane and Spherical Trigonometry.

Tables: Lyman and Goddard's Computation Tables.

3. ANALYTICAL GEOMETRY. *Second semester.* 5 h.

The aim is to familiarize the student with analytical methods of investigation. Special emphasis is placed upon the use of algebraic processes as a means of demonstrating geometric properties of loci. In addition to a study of the properties of conics, the transformation of co-ordinates and the general equation of the second degree are taken up. To this are added brief chapters on solid analytic geometry and higher plane curves.

Text-book: Rigg's Analytic Geometry.

Prerequisites: Eng. Math. 1 and 2.

4. DIFFERENTIAL CALCULUS. *First semester.* 5 h.

After the student becomes able to differentiate a given function with ease and accuracy, applications are taken up to problems in maxima and minima, expansions of functions in series, evaluation of indeterminate forms, radii and centers of curvature and curve tracing.

Text-book: Townsend and Goodenough's Essentials of Calculus.

Prerequisite: Eng. Math. 3.

5. INTEGRAL CALCULUS. *Second semester.* 5 h.

In this course the standard methods of integration are taken up, together with application to areas, volumes, rectification of curves, center of mass, moments of inertia, radius of gyration, and many practical engineering problems. A chapter on the elementary methods of integrating ordinary differential equations is included.

Text-book: Townsend and Goodenough's Essentials of Calculus.

Prerequisite: Eng. Math. 4.

6. LEAST SQUARES. *Second semester.* 2 h.

The following topics are among those treated: theory of probability, probability integral, adjustment of observations, precision of observations, direct observations, functions of observed quantities, independent and conditioned observations, probable error, mean error, constant errors, solution of normal equations.

Text-book: Merriman's Method of Least Squares.

Prerequisite: Eng. Math. 5.

7. DIFFERENTIAL EQUATIONS. *Second semester.* 3 h.

Text-book: Murray's Introductory Course in Differential Equations.

Prerequisite: Eng. Math. 5.

## LANGUAGES IN COLLEGE OF ENGINEERING

## ENGLISH.

1. ENGINEERING RHETORIC. *First semester.* 2 h.

A course in composition and rhetoric arranged with special reference to the needs of engineering students.

2. ENGINEERING RHETORIC. *Second semester.* 2 h.

This course is a continuation of Eng. Rhet. 1.

Summer reading: In addition to the reading in the above courses students are required to do a prescribed amount of reading during the summer vacations following the Freshman, Sophomore, and Junior years. The required lists of books are printed in a supplementary pamphlet.

## GERMAN.

3. ENGINEERING GERMAN. *First semester.* 3 h.

The course is designed to give a practical, scientific German vocabulary, as well as an ability to read rapidly ordinary scien-



tific material. It will include chemistry, physics, and geology as given in the text-book, with supplementary selections from current engineering magazines.

Text-book: Wait's German Science Reader.

Prerequisite: One year's high-school German.

4. **ENGINEERING GERMAN.** *Second semester.* 3 h.

A continuation of course 3 covering mineralogy, astronomy, and anatomy as given in the text-book, with supplementary selections from current engineering magazines.

Text-book: Wait's German Science Reader.

Prerequisite: German 3.

**FRENCH.**

5. **ENGINEERING FRENCH.** *First semester.* 3 h.

A course in grammar, pronunciation, composition, and sight-reading.

Text-books: Fraser and Squair's French Grammar; Super's French Reader.

6. **ENGINEERING FRENCH.** *Second semester.* 3 h.

A course in reading scientific French.

Text-books: Bowen's First Scientific French Reader; Herdler's Scientific French Reader; Luquiens' Popular Science.

Prerequisite: French 5.

**SPANISH.**

7. **ENGINEERING SPANISH.** *First semester.* 3 h.

A course in grammar, pronunciation, composition, and sight-reading.

Text-book: Giese's First Spanish Book and Reader.

8. **ENGINEERING SPANISH.** *Second semester.* 3 h.

A continuation of course 7 covering prose composition, modern Spanish fiction and plays, and selections from scientific Spanish.

Text-book: Bouilla's Spanish Daily Life, and selections of scientific Spanish.

Prerequisite: Spanish 7.



# SCHOOL OF MEDICINE

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## \*FACULTY

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JAMES H. BAKER, M.A., LL.D., President.

WILLIAM P. HARLOW, B.A., M.D., Dean.

### GROUP I. MEDICINE, PEDIATRICS, THERAPEUTICS, DIAGNOSIS

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Professor of Medicine.

GEORGE H. CATTERMOLLE, M.D., *Boulder*,  
Professor of Medicine (Pediatrics).

OSCAR M. GILBERT, M.D., *Boulder*,  
Professor of Medicine (Clinical Medicine).

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Professor of Medicine.

MOSES KLEINER, M.D., *Denver*,  
Professor of Therapeutics.

ALVIN R. PEEBLES, M.D., *Boulder*,  
Professor of Medicine (Therapeutics).

WILLIAM J. ROTHWELL, M.D., *Denver*,  
Professor of Medicine.

CHARLES F. SHOLLENBERGER, M.D., *Denver*,  
Professor of Medicine (Pediatrics).

HENRY SEWALL, Ph.D., M.D., *Denver*,  
Professor of Medicine.

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\* Arranged alphabetically in groups without reference to length of service.

HERBERT B. WHITNEY, B.A., M.D., *Denver*,  
Professor of Medicine (Pediatrics).

JOHN W. AMESSE, M.D., *Denver*,  
Instructor in Medicine.

HENRY S. DENISON, B.A., M.D., *Denver*,  
Instructor in Medicine.

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\*SAMUEL D. HOPKINS, M.D., *Denver*,  
Professor of Neurology and Psychiatry.

GEORGE E. NEUHAUS, M.D., *Denver*,  
Professor of Neurology and Psychiatry.

HOWELL T. PERSHING, M.S., M.D., LL.D., *Denver*,  
Professor of Neurology and Psychiatry.

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Professor of Roentgenology.

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Lecturer on Neurology.

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Lecturer on Electro-Therapeutics.

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Professor of Surgery.

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Professor of Surgery (Gynecology).

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LUMAN M. GIFFIN, M.D., *Boulder*,  
Professor of Surgery.

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\* Died February 4, 1911.

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Professor of Surgery (Gynecology and Abdominal Surgery).

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Professor of Ophthalmology.

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Professor of Ophthalmology and Otology.

DAVID H. COOVER, M.D., *Denver*,  
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Instructor in Laryngology and Rhinology; Ophthalmology and  
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CARBON GILLASPIE, M.D., *Boulder*,  
Instructor in Anatomy.



EDWARD B. TROVILLION, M.D., *Boulder*,  
Instructor in Anatomy.

WALTER W. WASSON, B.A., M.D., *Boulder*,  
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Professor of Bacteriology.

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Professor of Pathology.

FRANCIS J. EVANS, *Denver*,  
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ARTHUR MARGOT, *Boulder*,  
Assistant in Bacteriology.

EDWARD R. MUGRAGE, M.A., *Boulder*,  
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Professor of Chemistry (Toxicology).

JAMES H. PERSHING, B.A., *Denver*,  
Professor of Medical Jurisprudence.

WILLIAM A. JOLLEY, M.D., *Boulder*,  
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WILLARD J. WHITE, M.A., M.D., *Longmont*,  
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## PROFESSOR

WILLIAM C. BANE.

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## PROFESSORS

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## DOCTORS

ARTHUR J. MARKLEY.  
OLIVER LYONS.

# GENERAL STATEMENT

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## ANNOUNCEMENT

The Medical Department of the University of Colorado was opened in September, 1883. The Department has kept fully abreast of the best schools in the country, both as to methods of teaching and equipment. Special stress has always been laid on a thorough course of instruction in the fundamental branches, embraced in the curriculum of the first two years of the course, without which the mastery of the remainder of the curriculum is impossible. On the first of January, 1911, following the adoption by the State of the constitutional amendment permitting the change to be made, the third and fourth year classes were transferred to Denver, where greatly enlarged clinical facilities are available. The third year class spends two hours daily in practical work in the Dispensary. The fourth year class spends four hours daily in clinical work. In addition, the University Hospital at Boulder is used for the purpose of training the second year students in the fundamental principles of clinical work.

The School is a member of the Association of American Medical Colleges.

## UNION OF THE DENVER AND GROSS COLLEGE OF MEDICINE WITH THE UNIVERSITY SCHOOL OF MEDICINE

In April, 1910, the Denver and Gross College of Medicine signed a contract with the Regents of the University in accord with which the first two years of the College were discontinued in May, and the last two years January 1, 1911. By the terms of the contract, in January the professors of the Denver and Gross College became members of the Medical Faculty of the University. November 8, 1910, the people of the State adopted the constitutional amendment permitting the University to conduct all but the first two years of work in Medicine, Dentistry, and Pharmacy in Denver. On January 1, 1911, the University moved the last two years of the School of Medicine to Denver, having secured a building at Thirteenth and

Welton Streets. The first two years constitute the Boulder Division of the School and the last two years the Denver Division. The Denver and Gross College of Medicine was the union June 19, 1902, of the Denver College of Medicine, a department of the University of Denver, and the Gross Medical College. The former College was opened November, 1881, and the latter in 1887.

## EQUIPMENT IN BOULDER

### BUILDINGS.

**MEDICAL BUILDING**—The Medical Building is a two-story brick structure with three one-story wings, located at the southwest corner of the campus. It affords class rooms for lecture and recitation purposes, two large laboratories with abundant light on three sides, store rooms, general offices, and private laboratories for members of the faculty, and for advanced and graduate work.

**ANATOMY BUILDING**—This building was erected in 1908. It contains a large dissecting room, cloak rooms, an embalming room, and refrigerating plant capable of accommodating about 35 cadavers.

**CHEMISTRY BUILDING**—The Chemistry Building is located near the center of the campus. It is a two-story brick building, constructed with special reference to the teaching of chemistry, and devoted entirely to that purpose. It contains two large lecture rooms, and six laboratories, with abundant equipment for every kind of chemical work, reading rooms, private laboratories, stock rooms, balance room, chemical museum, etc.

**HALE SCIENCE BUILDING**—This is a four-story stone building with two two-story wings, located near the north end of the campus. It affords accommodations for the department of Biology, which includes the departments of Histology, Embryology and Animal Zoology, on the second floor. The laboratories are abundantly lighted from three sides.

**HOSPITAL**—The Hospital was erected during the summer of 1898, and was dedicated November 19th of that year. The building is located on a high bluff adjacent to the campus and overlooking the city of Boulder and the great plains, and affords a beautiful view of the foothills and Arapahoe Peaks in the distance. It contains accommodations for forty patients, in wards and private rooms, and has in addition an operating room, a large and very fully equipped clinical laboratory, a sun parlor, sterilizing rooms, etc. It is con-



structed according to the most approved plans of hospital construction, and its equipment is complete and thoroughly modern. It is used for the purpose of giving elementary instruction of a clinical character to the second year students.

**NURSES' HOME**—The Nurses' Home is an eight-room, one-story frame cottage, situated west of the Hospital and near the latter.

**LIBRARY**—The University Library contains 56,000 bound volumes. A reading room for the special use of medical students has been provided, and in this the files of the most important American, English, French and German medical periodicals and important books are found for the use of the students who have direct access to the shelves. The Library is open daily except Sunday, from 8:15 a. m. to 5:30 p. m., and from 7:00 to 10:00 p. m. throughout the academic year.

The following Medical Journals are now on file in the Library:

- |                                                                           |                                                                                                        |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| American Academy of Medicine Bulletin.                                    | Journal of Experimental Medicine.                                                                      |
| American Journal of Anatomy.                                              | Journal of Infectious Diseases.                                                                        |
| American Journal of Medical Sciences.                                     | Journal of Medical Research.                                                                           |
| American Journal of Obstetrics and Medical Record.                        | Journal of Nervous and Mental Diseases.                                                                |
| American Journal of Physiology.                                           | Journal of Physiology.                                                                                 |
| American Medical Association Journal.                                     | Lancet.                                                                                                |
| Annals of Surgery.                                                        | London Pathological Society, Transactions.                                                             |
| Archiv f. Pathologie, Anatomie u. Physiologie u. f. Klin. Med. (Virchow.) | Medical and Surgical Journal. (Boston.)                                                                |
| Archives of Internal Medicine.                                            | Medical Standard.                                                                                      |
| Berliner Klinische Wochenschrift. (Berlin).                               | Memphis Medical Monthly.                                                                               |
| Brain.                                                                    | Modern Medicine.                                                                                       |
| British Medical Journal.                                                  | Muenchner Medicinische Wochenschrift.                                                                  |
| Centralblatt f. Bakteriologie. Abteil. I. Originale and Referate; II.     | Neurologische Centralblatt.                                                                            |
| Centralblatt f. Stoffwechsell und Verdauungskrankheit.                    | New York and Philadelphia Medical Journal.                                                             |
| Colorado Medical Journal.                                                 | Public Health Journal.                                                                                 |
| Dental Record. (Lond.)                                                    | Quarterly Journal of Microscopical Science.                                                            |
| Dental Register. (Cincinnati.)                                            | Review of Neurology. (Edinburgh.)                                                                      |
| Deutschen Medicinische Wochenschrift.                                     | Revue de Medicine. (Paris.)                                                                            |
| Dominion Dental Journal. (Toronto.)                                       | Royal Microscopical Society. Journal.                                                                  |
| Health.                                                                   | Schmidt's Jahrbuch der in-u. Auslaendischen gesammten Medicin. Scienze Mediche Archiv. (Turin, Italy.) |
| Index Medicus.                                                            | Semaine Medicale. (Paris.)                                                                             |
| Index Surgeon General's Library.                                          | Studien u. d. Hirnrinde, Cajal.                                                                        |
| International Clinics.                                                    | Therapeutic Gazette.                                                                                   |
| Johns Hopkins Hospital Bulletin.                                          | University of Texas. Medical Series.                                                                   |
| Journal of Comparative Neurology                                          | Wiener Klinische Wochenschrift. (Vienna.)                                                              |
|                                                                           | Zeitschrift f. Tuberculosis.                                                                           |

## LABORATORIES.

The Anatomical Laboratory is situated in the Anatomical Building, already referred to. In addition to abundant material for dissections, it contains a large and very valuable collection of mounted preparations, skeletons, charts, models, etc., which is accessible to the students, under proper supervision, for use in connection with the work of the department.

Histology and Embryology are taught in the biological department. The laboratories are provided with compound microscopes, microtomes, thermostat, models, projection lantern, and other necessary equipment.

The Pathological Laboratory is a large room in the Medical Building, lighted on three sides. It is equipped with Leitz microscopes, the various types of microtome, of which four are provided for the use of students, and all re-agents, stains, etc., needed for thorough examination of material according to the most modern methods. Accommodations are afforded for advanced research work, and every encouragement is offered to students to undertake work of this character. The Pathological Museum is already quite extensive, and further material derived from operations, post mortem examinations, and from other sources, is being constantly added.

The course in Bacteriology is conducted in one of the large laboratories in the Medical Building. During the past two years a large amount of new and valuable equipment has been added, and the laboratory is fully equipped for teaching this branch under the most favorable conditions. The equipment includes an ample number of high power Leitz microscopes, with oil immersion lenses, and a complete equipment of sterilizers, a large incubating room, affording a separate incubator for each student, an abundance of glassware, and special apparatus for bacteriological examination of air, water, soil, milk, food, etc. Convenient to the laboratory are the animal rooms, with a full supply of animals for experimental purposes.

The courses in chemistry for the medical students are given in the Chemistry Building, which is situated conveniently near to the Medical Building.

The Physiological Laboratory has just been completed and newly equipped with a complete set of apparatus for the laboratory teaching of this important branch. The space available is large enough to accommodate a large number of students without crowding.

The Laboratory of Pharmacology is contained in a large room, well lighted from three sides, and is furnished with all the apparatus needed for the complete laboratory demonstration of the action of drugs.

## EQUIPMENT IN DENVER

### BUILDING.

MEDICAL BUILDING AND DISPENSARY—This is a three-story and basement building at the corner of Thirteenth and Welton Streets. It contains two lecture rooms, laboratories for work in pathology and the various branches of clinical diagnosis, smaller rooms for section and demonstration work, and rooms for the several departments of the Dispensary. The building is exceptionally well located for its purpose.

### CLINICS.

Training of an elementary character is given the second year class in the University Hospital at Boulder. In Denver clinics are held daily at the Denver City and County Hospital, 300 beds, and for small sections of students at St. Luke's Hospital, 100 beds, St. Anthony's Hospital, 200 beds, St. Joseph's Hospital, 200 beds, Mercy Hospital, 125 beds, besides the Woman's Hospital, The National Jewish Hospital for Consumptives, the State Home for Dependent Children, and the Contagious (Steele) Hospital. Clinics are held daily in the Dispensary from 12:00 to 2:00 p. m., small sections attending in rotation the clinics in Medicine, Neurology, Surgery, Gynecology, Orthopedics, Eye, Ear, Nose and Throat, and Dermatology and Genito-Urinary Diseases. There is abundant material for teaching Obstetrics, each member of the fourth year class being required to personally deliver ten cases, in addition to seeing cases delivered by members of the Faculty.

The Faculty believes that the greatest benefit from clinics can only be obtained for the students by bringing them into the closest possible touch with the patients. In accordance with this belief the clinics at the Dispensary are conducted as "clinical conferences," whereby the students examine and treat the patients exactly as if they were their own private cases, assist at, and perform operations, administer anæsthetics, and superintend the after-treatment of surgical cases.

### SESSION OF 1911-1912

The next term begins September 11, 1911.

Applicants for admission are urged to see that their entrance credentials are in the hands of the Secretary on or before September 4, 1911, in order that these may be examined and passed upon by the credentials committee in advance of registration. For additional information, address the Dean, William P. Harlow, M.D., or the Secretary of the first and second year Division, James C. Todd, M.D., Boulder, or the Secretary of the third and fourth year Division, Ross C. Whitman, M.D., Denver.

### REQUIREMENTS FOR ADMISSION

Two years of college work, estimated at sixty semester hours, and based upon a four year high-school preparation, are required for admission. The following subjects are prescribed: at least one year of Latin, one year of high-school or college biology, one year of high-school or college physics, one year of college chemistry. [In 1911, the chemistry may have been taken in either high school or college.]

Classes in the Medical School graduating in 1912 and 1913 are subject to the former requirements for admission, namely, graduation from a four-year high school, or equivalent.

All candidates for admission should present a certificate of good character from two physicians in the state in which they last resided.

Students are earnestly advised to be present at the opening of the session. No student will be allowed to enter later than the fifth week of the academic year.

### ADVANCED STANDING

Candidates, from a medical college on the accepted list, who desire advanced standing in medical subjects, must present satisfactory credentials to the Dean or Secretary of the Medical School at the time of matriculation.

### COURSES LEADING TO TWO DEGREES

Students who pursue courses during the first two years of collegiate work, which are not included in the medical curriculum, or who, in case medical courses have been included in the work of the first two years, take a corresponding amount of non-medical courses during the later years of the course, may earn a degree in Arts after

four years, and a degree in Medicine after two additional years, thus affording a course leading to two degrees after six years' work. The subjects in the Medical Curriculum for which credit is given in the College of Liberal Arts are as follows:

|                                           |          |
|-------------------------------------------|----------|
| First Year Anatomy.....                   | 8 hours  |
| Second Year Anatomy.....                  | 8 hours  |
| Histology .....                           | 8 hours  |
| Embryology .....                          | 3 hours  |
| Physiology and Physiological Chemistry... | 10 hours |
| Chemistry, Inorganic and Organic.....     | 10 hours |
| Bacteriology .....                        | 4 hours  |
| Pathology .....                           | 9 hours  |
| <hr/>                                     |          |
| 60 hours                                  |          |

This work, which constitutes part of the medical curriculum of the first and second years, is accepted in the College of Liberal Arts as counting toward a degree. The allowance of sixty hours' credit in the above schedule, is based on a requirement of one hundred and twenty hours for graduation.

### REQUIREMENTS FOR A DEGREE

Every candidate for the degree of Doctor of Medicine must be 21 years of age, possess a good moral character, and be of temperate habits. He must have passed satisfactory examinations in all the required studies included in the full course of instruction. He must have attended regularly four full courses of lectures (allowance being made only for absence occasioned by the sickness of the student or of his immediate family, such absence not to exceed twenty per centum of any course) of not less than thirty-two weeks each, in some accredited medical college. No two of such courses shall have been taken in the same year. The last course shall be taken in this School.

### FEES

For fees see page 65.

## COURSES

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The tables below give the schedule of courses for the academic year 1910-1911, followed by a summary, giving the number of hours spent in each subject, classified as lectures, laboratory hours, and clinics, by years.

The schedule here given for the third and fourth years is that used during the second semester of 1910-1911. Some important changes will be made for the year 1911-1912, but definite hours can not yet be assigned. The following courses, heretofore given in the fourth year, will be given to the third and fourth year class jointly in 1911-1912, and thereafter to the third year class only: didactic courses in dermatology, ophthalmology, otology, laryngology and rhinology, medical jurisprudence and toxicology, therapeutics, and a part of the didactic work in obstetrics.



## SCHEDULE

FIRST YEAR

FIRST SEMESTER, 1910-1911

| Hours          | Monday                                                                                    | Tuesday                                                                         | Wednesday                                                                                 | Thursday                                                                                  | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Gen. Chem.<br>Laboratory<br>Ch. B.                                              | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 11:00 |                                                                                           |                                                                                 | 11:00 to 11:30<br>Chapel                                                                  |                                                                                           |                                                                                           |
| 11:30 to 12:30 | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |                                                                                 | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |                                                                                           | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |
| 1:30 to 3:20   | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale Bldg.           | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale Bldg. | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale Bldg.           | Histology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale Bldg.           |                                                                                           |
| 3:30 to 4:20   | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                 | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        |

FIRST YEAR  
SECOND SEMESTER, 1910-1911

| Hours          | Monday                                                                                    | Tuesday                                                                       | Wednesday                                                                                 | Thursday                                                                                  | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:10 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Gen. Chem.<br>Laboratory<br>Ch. B.                                            | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 11:00 | Pharmacology<br>Lectures<br>Dr. Jolley                                                    |                                                                               | Comparative<br>Anatomy<br>Prof. Cockerell<br>Hale B.                                      | Pharmacology<br>Lecture<br>Laboratory<br>Dr. Jolley<br>E. L.                              |                                                                                           |
| 11:30 to 12:30 | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |                                                                               | 11:00 to 11:30<br>Chapel<br><br>Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.            |                                                                                           | Gen. Chem.<br>Lectures<br>Dr. Ekeley<br>Ch. B.                                            |
| 1:30 to 3:20   | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B. | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Embryology<br>Lectures<br>Recitations<br>Laboratory<br>Dr. Ramaley<br>Hale B.             | Gen. Chem.<br>Laboratory<br>Ch. B.                                                        |
| 3:20 to 4:20   | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                               | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           | Physiology<br>Recitations<br>Dr. Queal<br>N. L.                                           |                                                                                           |

SECOND YEAR  
FIRST SEMESTER, 1910-1911

| Hours         | Monday                                                                                                                           | Tuesday                                       | Wednesday                                     | Thursday                                      | Friday                             |
|---------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------------------|
| 8:00 to 12:20 | Class is divided into two sections:<br>Section 1, as assigned, goes to Anatomy.<br>Section 2, as assigned, goes to Bacteriology. |                                               |                                               |                                               |                                    |
| 1:30 to 2:20  |                                                                                                                                  | Pathology<br>Quiz<br>Dr. Whitman              | Bacteriology<br>Lecture<br>Dr. Burnett        | Bacteriology<br>Lecture<br>Dr. Burnett        |                                    |
| 2:30 to 3:20  | Organic<br>Chemistry<br>Laboratory                                                                                               | Organic<br>Chemistry<br>Lecture<br>Dr. Ekeley | Organic<br>Chemistry<br>Lecture<br>Dr. Ekeley | Organic<br>Chemistry<br>Lecture<br>Dr. Ekeley | Organic<br>Chemistry<br>Laboratory |
| 3:30 to 4:20  |                                                                                                                                  | Materia Med.<br>Lecture<br>Dr. Andrew         | Pathology<br>Quiz<br>Dr. Whitman              | Materia Med.<br>Lecture<br>Dr. Andrew         |                                    |
| 4:30 to 5:20  | Organic<br>Chemistry<br>Lecture<br>Dr. Ekeley<br>Ch. B.                                                                          |                                               |                                               |                                               |                                    |

SECOND YEAR  
SECOND SEMESTER, 1910-1911

| Hours          | Monday                                                                                    | Tuesday                                                                                   | Wednesday                                                                                 | Thursday                                       | Friday                                                                                    |
|----------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------|
| 8:00 to 10:00  | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. | Nervous<br>Anatomy<br>Dr. Childs<br>Ch. B.     | Anatomy<br>Lectures<br>Recitations<br>Dissections<br>Dr. Dean and<br>Assistants<br>An. B. |
| 10:10 to 11:00 | Pathology<br>Laboratory<br>8 Weeks<br>Dr. Todd                                            | Phys. Chem.<br>Recitations<br>Dr. Todd                                                    | Pathology<br>Laboratory<br>8 Weeks<br>Dr. Todd                                            | Phys. Chem.<br>Recitations<br>Dr. Todd         | Pathology<br>Laboratory<br>8 weeks<br>Dr. Todd.                                           |
| 11:30 to 12:20 |                                                                                           | 11:00 to 11:30<br>Chapel                                                                  |                                                                                           | Materia Med.<br>Dr. Andrew                     |                                                                                           |
| 1:30 to 2:20   | Phys. Chem.<br>Laboratory<br>Ch. B.                                                       | Pathology<br>Laboratory<br>8 Weeks<br>Dr. Todd                                            | Phys. Chem.<br>Laboratory<br>Ch. B.                                                       | Pathology<br>Laboratory<br>8 weeks<br>Dr. Todd | Pathology<br>Recitation<br>Dr. Todd                                                       |
| 2:30 to 3:20   |                                                                                           | Pathology<br>Recitation<br>Dr. Todd                                                       |                                                                                           |                                                |                                                                                           |
| 3:30 to 4:20   |                                                                                           |                                                                                           |                                                                                           |                                                |                                                                                           |

THIRD YEAR  
SECOND SEMESTER, 1910-1911

| Hours          | Monday                                     | Tuesday                                  | Wednesday                              | Thursday                                        | Friday                                   |
|----------------|--------------------------------------------|------------------------------------------|----------------------------------------|-------------------------------------------------|------------------------------------------|
| 8:00 to 9:00   | Medicine<br>Dr. Amesse                     | Surgery<br>Dr. Buchtel                   | Medicine<br>Dr. Denison                | Surgery<br>Dr. Buchtel                          |                                          |
| 9:00 to 10:00  | Surgery<br>Dr. Harvey                      | Clinical<br>Diagnosis<br>Dr. Whitman     | Surgery<br>Dr. Giffin                  | Clinical<br>Diagnosis<br>Section<br>Dr. Whitman | Surgery<br>Dr. Campbell                  |
| 10:00 to 11:00 | Neurology<br>Dr. Neunhaus                  |                                          | Pathology<br>Laboratory<br>Dr. Whitman |                                                 | Obstetrics<br>Drs. Hutchison<br>and Reed |
| 11:00 to 12:00 | Pathology<br>Quiz<br>Dr. Whitman           | Medicine<br>Dr. Graham                   |                                        |                                                 |                                          |
| 1:00 to 3:00   | Eye, Ear, Nose,<br>Throat<br>Demonstration | Physical<br>Diagnosis<br>Dr. Denison     | Electro<br>Therapeutics<br>Dr. Stover  | Physical<br>Diagnosis<br>Dr. Denison            | Neurology<br>Clinical<br>Demonstration   |
| 3:00 to 4:00   | Medicine<br>Dr. Peebles                    | Medical<br>Jurisprudence<br>Mr. Pershing |                                        | Medical<br>Jurisprudence<br>Dr. White           |                                          |
| 4:00 to 5:00   |                                            |                                          | Hygiene<br>Dr. Byles                   | Otology<br>Dr. Foster                           | Laryngology<br>Dr. Waxham                |

FOURTH YEAR  
SECOND SEMESTER, 1910-1911

| Hours          | Monday                                                                                                                                                                                                                                                                                           | Tuesday                                        | Wednesday                            | Thursday                               | Friday                                           | Saturday                                               |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------|----------------------------------------|--------------------------------------------------|--------------------------------------------------------|
| 8:00 to 10:00  | Gynecology<br>Clinic<br>County Hospital                                                                                                                                                                                                                                                          | Medicine<br>Clinic<br>County Hospital          | Surgery<br>Clinic<br>County Hospital | Neurology<br>Clinic<br>County Hospital | Medicine<br>Clinic<br>County Hospital            | Surgery<br>Clinic<br>County Hospital                   |
| 10:00 to 11:00 | Medicine<br>Case Teaching<br>Dr. Emery                                                                                                                                                                                                                                                           | Surgery<br>Lecture<br>Drs. Rogers and<br>Craig | Surgery<br>Lecture<br>Dr. Lyman      | Surgery<br>Lecture<br>Dr. Freeman      | Obstetrics<br>Lecture<br>Drs. Taylor and<br>Reed | Eye, Ear, Nose,<br>Throat<br>Clinic<br>County Hospital |
| 11:00 to 12:00 | Dermatology<br>Dr. Wiest, etc.                                                                                                                                                                                                                                                                   | Obstetrics<br>Manikin Course<br>Dr. McNaught   | Pediatrics<br>Lecture<br>Dr. Whitney | Medical<br>Jurisprudence<br>Dr. White  | Gynecology<br>Lecture<br>Dr. Elder               |                                                        |
| 1:00 to 3:00   | <p style="text-align: center;"><b>DISPENSARY.</b></p> <p>The class is divided into sections, to spend 3 weeks in each of the following services:<br/> 1. Medicine, (including Pediatrics). 2. Surgery. 3. Neurology. 4. Gynecology. 5. Dermatology.<br/> 6. Eye, Ear, Nose, Throat. 7. G.—U.</p> |                                                |                                      |                                        |                                                  |                                                        |
| 3:00 to 4:00   | Ophthalmology<br>Dr. Black                                                                                                                                                                                                                                                                       | Medical<br>Jurisprudence<br>Mr. Pershing       | Dietetics<br>Dr. Peebles             | Medicine<br>Lecture<br>Dr. Rothwell    | Neurology<br>Lecture<br>Dr. Delehanty            |                                                        |
| 4:00 to 5:00   | Therapeutics<br>Dr. Peebles                                                                                                                                                                                                                                                                      | Neurology<br>Lecture<br>Dr. Pershing           | Therapeutics<br>Dr. Peebles          | Otology<br>Dr. Foster                  | Laryngology<br>Dr. Waxham                        |                                                        |



## SUMMARY

| SUBJECTS                                       | First Year |      |       | Second Year |      |       | Third Year |      |       | Fourth Year |      |       | Grand Total |
|------------------------------------------------|------------|------|-------|-------------|------|-------|------------|------|-------|-------------|------|-------|-------------|
|                                                | Lec.       | Lab. | Total | Lec.        | Lab. | Total | Lec.       | Lab. | Clin. | Total       | Lec. | Clin. | Total       |
| Anatomy.....                                   | 140        | 180  | 320   | 108         | 156  | 264   | ...        | ...  | ...   | ...         | ...  | ...   | 584         |
| Histology.....                                 | 40         | 120  | 160   | ...         | ...  | ...   | ...        | ...  | ...   | ...         | ...  | ...   | 160         |
| Embryology.....                                | 36         | 60   | 96    | ...         | ...  | ...   | ...        | ...  | ...   | ...         | ...  | ...   | 96          |
| Chemistry.....                                 | 96         | 192  | 288   | 96          | 160  | 256   | ...        | ...  | ...   | ...         | ...  | ...   | 544         |
| Physiology.....                                | 128        | ...  | 128   | ...         | 58   | 58    | ...        | ...  | ...   | ...         | ...  | ...   | 186         |
| Pharmacology.....                              | 16         | 32   | 48    | 64          | 38   | 102   | ...        | ...  | ...   | ...         | ...  | ...   | 150         |
| Bacteriology.....                              | ...        | ...  | ...   | 32          | 176  | 208   | ...        | ...  | ...   | ...         | ...  | ...   | 208         |
| *Pathology.....                                | ...        | ...  | ...   | 64          | 92   | 156   | 32         | 64   | ...   | 96          | ...  | ...   | 32          |
| Hygiene.....                                   | ...        | ...  | ...   | ...         | ...  | ...   | 32         | ...  | ...   | ...         | 64   | 288   | 352         |
| Medicine.....                                  | ...        | ...  | ...   | ...         | ...  | ...   | 128        | ...  | 128   | 256         | ...  | ...   | 608         |
| Pediatrics (Clinics Included in Medicine)..... | ...        | ...  | ...   | ...         | ...  | ...   | ...        | ...  | ...   | ...         | ...  | ...   | 252         |
| Therapeutics.....                              | ...        | ...  | ...   | ...         | ...  | ...   | 32         | ...  | ...   | 32          | ...  | ...   | 32          |
| Dietetics.....                                 | ...        | ...  | ...   | ...         | ...  | ...   | 64         | ...  | ...   | 64          | ...  | ...   | 64          |
| Physical Diagnosis (included in Medicine)..... | ...        | ...  | ...   | ...         | ...  | ...   | ...        | ...  | ...   | ...         | 32   | ...   | 32          |
| Clinical Microscopy.....                       | ...        | ...  | ...   | ...         | ...  | ...   | ...        | ...  | ...   | ...         | ...  | ...   | ...         |
| †Neurology and Electro-Therapeutics).....      | ...        | ...  | ...   | ...         | ...  | ...   | 16         | 64   | ...   | 80          | ...  | ...   | 80          |
| Surgery.....                                   | ...        | ...  | ...   | ...         | ...  | ...   | 32         | ...  | 60    | 92          | 64   | 134   | 188         |
| Gynecology.....                                | ...        | ...  | ...   | ...         | 160  | 160   | ...        | ...  | 96    | 256         | 112  | 238   | 400         |
| †Obstetrics.....                               | ...        | ...  | ...   | ...         | 32   | 32    | ...        | ...  | ...   | 32          | ...  | 128   | 160         |
| Hygiene.....                                   | ...        | ...  | ...   | ...         | ...  | ...   | 64         | 60   | ...   | 124         | 32   | ...   | 156         |
| Medical Jurisprudence.....                     | ...        | ...  | ...   | ...         | ...  | ...   | 32         | ...  | ...   | 32          | ...  | ...   | 32          |
| Eye, Ear, Nose and Throat.....                 | ...        | ...  | ...   | ...         | ...  | ...   | 32         | ...  | ...   | 32          | ...  | ...   | 32          |
| Dermatology and Genito-Urinary Dis.....        | ...        | ...  | ...   | ...         | ...  | ...   | 64         | ...  | 60    | 124         | ...  | 124   | 248         |
| Totals.....                                    | 456        | 584  | 1040  | 364         | 680  | 1044  | 720        | 188  | 344   | 1252        | 336  | 1016  | 1352        |
|                                                |            |      |       |             |      |       |            |      |       |             |      |       | 468         |

\* Pathology—Does not include time at autopsies.

† Neurology and Electro-Therapeutics—60 hours clinics in third year, includes Roentgenology.

‡ Obstetrics—Does not include time at clinical cases.

The above table is based on a teaching year of thirty-two weeks, four weeks having been subtracted from the academic year of thirty-six weeks, one week for registration, two weeks for examinations, and one week for graduation exercises.

# THE COURSES IN DETAIL

## FIRST YEAR (AT BOULDER)

### ANATOMY

PROFESSORS DEAN AND COCKERELL, AND DOCTORS TROVILLION, JOHN ANDREW, GILLASPIE AND WASSON:—

Anatomy is taught by means of lectures, recitations, drawing, and demonstrations on the cadaver. Work in the dissecting room is prosecuted under the personal supervision of the professor and demonstrators of anatomy. Systematic demonstrations are made on the cadaver, and no pains are spared to have the student acquire a thorough knowledge of the anatomical details which are the necessary foundation for a complete medical education. Each student dissects two complete lateral halves of the body, one-half in the first year, and a second half in the following year.

Every facility and encouragement will be given the student in the anatomical room to pursue work beyond the requirements of the prescribed course. The anatomical material is furnished free.

The working hours are from 8:10 to 10:00, throughout the year. The time is apportioned as follows:

1. LECTURES. *Both semesters.* 2 h. as appointed.

Covering the subjects of osteology, arthrology, myology, and angiology.

Professor Dean.

2. RECITATIONS. *Both semesters.* 2 h. as appointed.

These carry the student over the work covered by the lectures.

Dr. Andrew.

3. DISSECTIONS. *Both semesters.* 6 h.

Students in this year will be required to dissect not less than one complete lateral half under the direct supervision of the demonstrator of anatomy and assistants who will be in attendance daily. Quizzes will be held over the cadaver on the work done.

Professor Dean and Assistants

4. COMPARATIVE ANATOMY. *Second semester. W. 10:10 to 11:00.*

The lectures cover the principles of comparative anatomy, with discussions of questions of heredity, adaptation, evolution, etc.

Professor Cockerell.

Text-books: Cunningham, \$6.00; Morris, \$7.50; Piersol, Holden's Practical Anatomy, \$3.00; Treve's Applied Anatomy, Sobotta, McMurrich.

Collateral Reading: Toldt's Atlas of Human Anatomy, Deaver's Surgical Anatomy, Quain's Anatomy, Edinger's Anatomy of the Nervous System, Spalteholz's Atlas of Human Anatomy.

## CHEMISTRY

PROFESSOR EKELEY AND MR. CURTIS:—

1. GENERAL INORGANIC CHEMISTRY. *Both semesters. M. W. F. 11:30 to 12:20.*

A course of lectures and recitations dealing with the laws and theories of chemistry, together with a study of the elements and their most important compounds.

2. GENERAL INORGANIC CHEMISTRY. *Both semesters. Tu. 8:10 to 12:20. F. 1:30 to 4:30.*

A detailed laboratory course supplementing course 1. A course in qualitative analysis is included.

Text-book: Holleman, \$2.50; Manual, 75 cents.

## HISTOLOGY AND EMBRYOLOGY

PROFESSOR RAMALEY AND MR. ROBBINS:—

1. HISTOLOGY. *First semester. M. Tu. W. Th. 1:30 to 3:20. To about February 15.*

Lectures, laboratory and text-book work.

The course begins with the study of the cell and simple tissues; then the glands, the teeth, the vascular and lymphatic systems are taken up. In the second semester the respiratory, excretory, reproductive, and nervous systems, and sense organs are studied. Sufficient technical instruction is given to enable the students to work for themselves.

2. EMBRYOLOGY. *Second semester. M. Tu. W. Th. 1:30 to 3:20. From about February 15 to June 1.*

The course begins with a general account of the germ cell and the different methods of reproduction. Suitable material is provided for work on typical methods of gastrulation and the study of the blastoderm in different forms. The development of the chick and pig will be studied in detail. In the last part of the course attention is given more particularly to human embryology.

3. MEDICAL ZOOLOGY. *Second semester. M. Tu. W. Th. 1:30 to 3:20. For three weeks.*

In this course is given the structure and life history of such animals as are of most importance in the causation or transmission of disease. The work consists of lectures, illustrated with lantern slides, and of laboratory work. Some of the more important forms discussed are the following: mosquitoes, ticks, mites, parasitic worms, protozoa. Special attention is given to life history, methods of infection, etc.

Text-books: Histology, Ferguson, \$4.00; Embryology, Bailey, \$4.00; McMurrich.

Reference books: Histology, Stohr; Embryology, Minot.

Library reference works: Parker and Haswell, Leuckhart, Cambridge Natural History, Hertwig. Students are also referred to recent literature in current Medical Journals.

## PHYSIOLOGY

PROFESSOR QUEAL:—

1. PHYSIOLOGY. *Both semesters. M. Tu. W. Th. 3:30 to 4:20.*

The work is conducted in the form of recitations on assigned subjects, with a limited amount of explanatory lecture. The course covers the subjects of general and cellular physiology, physiology of nerve and muscle, digestion, absorption, secretion, nutrition, animal heat and force, blood, lymph, circulation, respiration and excretion, physiology of the central nervous system and the special senses.

Text-books: Brubacker, \$4.00; Lombard.

Reference books: Howell, Hall, Tigerstedt.

## PHARMACOLOGY

DR. JOLLEY:—

1. PHARMACOLOGY. *Second semester.* M. 10:10 to 11:30. Th. 10:10 to 12:20.

This is an introductory course, conducted chiefly as laboratory exercises, and designed to introduce the student to the various forms of drug preparations, and the elementary principles of drug action.

Text-book: Sollmann, \$4.00.

## SECOND YEAR (AT BOULDER)

## ANATOMY

PROFESSORS DEAN AND CHILDS, AND DOCTORS TROVILLION, JOHN ANDREW, AND WASSON:—

The working hours are from 8:10 to 10:00 throughout the year. The time is apportioned as follows:

1. LECTURES. *Both semesters.* 2 h. as appointed.

These cover the anatomy of the central nervous system, the cranial and peripheral nerves, regional and surgical anatomy and surface landmarks. During each semester the lectures are supplemented by practical demonstrations and dissections of the cadaver especially prepared for the class on the prescribed subjects.

Professor Childs.

2. RECITATIONS. *Both semesters.* 2 h. as appointed.

These follow the general plan of the lectures.

Dr. Trovillion.

3. DISSECTIONS. *Both semesters.* 6 h.

During this year a second complete lateral half is dissected, and students are required to study and make drawings of cross sections of the brain, spinal cord, and the cadaver.

Text-books: Cunningham, \$6.00; Morris, \$7.50; Piersol, Holden's Practical Anatomy, \$3.00; Treve's Applied Anatomy, Sobotta, McMurrich.

Collateral Reading: Toldt's Atlas of Human Anatomy, Deaver's Surgical Anatomy, Quain's Anatomy; Edinger's Anatomy of the Nervous System, Spalteholz's Atlas of Human Anatomy.

## BACTERIOLOGY

PROFESSOR BURNETT:—

1. GENERAL BACTERIOLOGY. *First semester. W. Th. 1:30 to 2:30.*  
Lectures and recitations.

Professor Burnett.

Text-books: Hiss and Zinsser; Park's Pathogenic Bacteria and Protozoa, \$3.75; Jordan's Text-book of Bacteriology, Stitt's Bacteriology, Abbott's Principles of Bacteriology, \$3.75; William's Bacteriology, Ricketts' Immunity, Chester's Manual of Determinative Bacteriology, Eyre's Bacteriological Technique, etc.

2. PRACTICAL BACTERIOLOGY. *First semester, nine weeks. M. Tu. W. Th. F. 8:00 to 12:20.*

The course is divided into two main portions. In the first part of the course the student is instructed in the methods of bacteriologic technique and in the general principles of bacteriology. Many of the non-pathogenic bacteria are studied in the early part of the work. As soon as the student has studied a sufficient number of non-pathogenic micro-organisms a more detailed study of the pathogenic bacteria is entered upon. Much of this work is accompanied by animal experiments. In the latter part of the course some time is given to water and milk analysis. Each student is required to work out and identify a number of organisms given out as unknowns. The laboratory is open on Saturdays, from 8:00 to 12:30, for the benefit of students who are unable to finish the assigned work during the week, but attendance on these days is not required.

Professor Burnett and Assistant.

3. ADVANCED BACTERIOLOGY. *Second semester.*

This is an optional course and is open only to a limited number of students.

This course deals especially with the practical methods of immunization, preparation of vaccines, serum reactions, determination of the efficiency of antiseptics and disinfectants. Several of the more important protozoal diseases are studied. To such students as are qualified will be assigned special problems for investigation.

Professor Burnett.



## PHYSIOLOGY

PROFESSOR BURNETT:—

1. PHYSIOLOGY. *Second semester, second half. M. Th. F. 10:10 to 12:20.*

The course consists of practical laboratory exercises in which the student demonstrates for himself the physiological phenomena governing nerve-muscle, respiration, circulation, etc.

Text-books: Lombard's Manual, \$1.50; Hall's Manual.

## PHARMACOLOGY AND MATERIA MEDICA

PROFESSOR C. F. ANDREW AND DR. JOLLEY:—

1. MATERIA MEDICA. *First semester. Tu. Th. 4:00 to 4:50. Second semester. Tu. Th. 11:30 to 12:20.*

This is a lecture course covering the important drugs used as therapeutic agents.

Professor Andrew.

2. PHARMACOLOGY. *Second semester, second half. Th. F. 10:10 to 12:20.*

The course consists of laboratory exercises conducted by the students, and demonstrations by the instructor, showing the action on animals of the most important drugs. The course is conducted in connection with the laboratory course in physiology described above.

Dr. Jolley.

Text-books: Sollmann, \$4.00; Wood, \$5.00; Hare, \$4.00; Cushney, \$3.75.

## CHEMISTRY

PROFESSORS EKELEY AND TODD AND MR. CURTIS:—

1. ORGANIC CHEMISTRY. *First semester M. 4:30 to 5:20; Tu. W. Th. 2:30 to 3:20.*

The lecture course covers the different classes of organic compounds, with discussions of structural formulæ, and familiarizes the student with the important representatives of each group.

Professor Ekeley.

2. ORGANIC CHEMISTRY. *First semester. M. F. 1:30 to 4:20.*

The course consists of laboratory exercises in which the student obtains a first-hand knowledge of the compounds discussed in the lectures.

Professor Ekeley and Assistants.

3. PHYSIOLOGICAL CHEMISTRY. *Second semester. Tu. Th. 10:10 to 11:00.*

The recitations are designed to review and clarify the work of the laboratory course next described.

Professor Todd.

4. PHYSIOLOGICAL CHEMISTRY. *Second semester. M. W. 1:30 to 4:20.*

After a review in the laboratory of the chemistry of the carbohydrates, fats, proteids; salivary, gastric, and intestinal digestion, etc., the student is made familiar with the various tests used in clinical medicine, by means of practical tests on unknowns furnished by the instructor.

Professor Todd and Mr. Curtis.

Text-books: Holleman, \$2.25; Lab. Manual, \$0.80; Hawk, \$3.00.

## PATHOLOGY

PROFESSOR TODD:—

1. GENERAL PATHOLOGY. *First semester. Tu. 1:30 to 3:20. W. 3:30 to 4:20. Second semester. Tu. 3:30 to 4:20. F. 1:30 to 2:20.*

The course consists of recitations based on assigned portions of Ziegler's text.

2. PATHOLOGY. *One-half second semester. M. W. F. 10:10 to 12:20. Tu. Th. 1:30 to 3:20.*

Specimens are given out to the class as unknowns, to be identified, described, and diagnosed. Approximately 200 specimens illustrating various microscopic lesions and tumors are demonstrated in this way during the course, and the students are required to make drawings of many of these.

Text-book: Ziegler, \$5.50.

## THIRD YEAR (AT DENVER)

MEDICINE AND MEDICAL DIAGNOSIS AND  
THERAPEUTICS

PROFESSORS CATTERMOLLE, ARNEILL, WHITMAN, GILBERT, PEEBLES,  
SEWALL, ROTHWELL, HALL, SHOLLENBERGER, WHITNEY, BONNEY,  
KLEINER, AND DOCTORS DENISON, AMESSE AND GRAHAM:—

1. THEORY AND PRACTICE. *Both semesters. M. 2:00 to 3:00.*

This is a lecture course in which the principles of medicine are dealt with. It is continuous with the corresponding course given in the fourth year.

Professor Peebles.

2. QUIZ COURSE. *Both semesters. M. 8:00. Tu. W. 11:00.*

This is a systematic quiz course, covering the ground of internal medicine.

Doctors Denison, Amesse and Graham.

3. CLINICAL THERAPEUTICS. *Both semesters. M. W. 3:00.*

This is a lecture and quiz course on general therapeutics, including hydro-, vaccine-, serum-, organo-, climato-, and mechano-therapy, and massage.

Professors Peebles and Kleiner.

4. PHYSICAL DIAGNOSIS. *Daily for six weeks. 12:00 to 2:00.*

Lectures, recitations, and practical work. Dispensary patients are made use of for teaching the abnormal signs.

Doctors Denison and ———.

5. CLINICAL DIAGNOSIS. *First or second semester. Tu. Th. 9:00 to 11:00. W. 10:00.*

This course covers practical examination, microscopically and chemically, of blood, sputum, stomach contents, urine, feces, and the various pathological excretions and secretions.

Professor Whitman.

Text-books: Edwards, \$5.50; Osler, \$5.50; Anders, \$5.50; Tyson, Cabot, \$3.50; Sahli, \$6.50; Emerson, \$5.00.

Reference books: Albutt's System, Osler's Modern Medicine, Nothnagel's Encyclopedia of Practical Medicine, (American Edition), Forchheimer's The Prophylaxis and Treatment of Internal Diseases, Da Costa, Wilson, Current Medical Literature.

## NEUROLOGY

PROFESSOR NEUHAUS AND DOCTORS CYRUS W. PERSHING AND LAZELL:—

1. PRINCIPLES OF NEUROLOGY. *Both semesters. M. 11:00.*

The lectures cover a review of the anatomy and physiology of the central nervous system, the symptomatology of these regions, methods of case taking, the examination of patients, etc.

Professor Neuhaus.

2. DEMONSTRATION COURSE. *Daily for six weeks. 12:00 to 2:00.*

The course consists in practical exercises in the examination of patients, making of physical examinations from the neurological point of view, with drill in the physiological interpretation of neurological signs and symptoms, and includes instruction in the application of electricity in its various forms to diagnosis and therapeusis.

Professor Neuhaus and Doctors Pershing and Lazell.

Text-book: Dana, \$6.00.

## SURGERY

PROFESSOR HARVEY, ASSISTANT PROFESSOR BUCHEL, AND DOCTORS CAMPBELL AND GIFFIN:—

1. MINOR SURGERY AND PRINCIPLES OF SURGERY. *Both semesters. Tu. Th. 8:00. M. W. F. 9:00.*

Lectures and recitations. The course covers anæsthesia, the general principles of operative technique, the laws of inflammation and repair of tissues, the surgery of the bones and joints, and the surgical operations generally included under the title "Minor Surgery."

Professor Harvey, Assistant Professor Buchtel  
and Doctors Campbell and Giffin.

2. OPERATIVE SURGERY. *Both semesters. 3 h. to be arranged.*

During the first semester the students perform the principal operations upon the cadaver, under the direction of the instructor. Special attention is given to the technique of operative work. Preceding each operative procedure a thorough description of the operation together with the reasons governing its performance, is given. Quizzing is a prominent feature of this course.

During the second semester the principal operations are performed on the dog. Special attention is given to aseptic methods, administration of anæsthetics and after treatment.

Dr. Campbell.

'Text-books: Da Costa, \$5.50; Parke, Nancrede's Principles of Surgery, Senn's Principles of Surgery.

Reference books: Jacobson's The Operations of Surgery, Bryant's Operative Surgery.

## OBSTETRICS

PROFESSORS TAYLOR, HUTCHISON AND ASSISTANT PROFESSOR

REED:—

1. LECTURE COURSE. *Both semesters. 2 h. to be arranged.*

Covering the physiology, diagnosis, mechanics, and after management of normal pregnancy and obstetrical surgery.

2. MANIKIN COURSE. *Daily for six weeks. 12:00 to 2:00.*

Small sections of the class are given practical drill on the manikin, and in methods of making physical examinations of Gynecological and Obstetrical cases from the Dispensary Service.

Professor Hutchison and Assistants.

Text-book: Edgar, \$6.00.

## OPHTHALMOLOGY

PROFESSORS JACKSON AND BLACK, DR. SPENCER AND ASSISTANTS:—

1. LECTURE COURSE. *First and second semester. 1 h. as arranged.*

The lectures cover the principles of physiological optics and refraction, the ocular movements, and the diseases of the eye which are of most importance in general practice.

Professors Jackson and Black.

Text-books: Jackson, \$2.50; Hansell and Sweet.

## OTOLOGY

PROFESSORS FOSTER AND BANE:—

1. LECTURE COURSE. *One semester. 1 h. as arranged.*

The lectures cover the ground of the diseases of the ear.

Text-books: Roosa and Douglas, Buck, Bacon, Saunder's Hand Atlas.

## LARYNGOLOGY AND RHINOLOGY

PROFESSORS WAXHAM AND LEVY, DR. SPENCER AND ASSISTANTS:—

1. LECTURE COURSE. *One semester. 1 h. as arranged.*

The lectures cover the ground of the diseases of the nose and throat.

Professors Waxham and Levy.

2. DEMONSTRATION COURSE. *Daily for six weeks. 12:00 to 2:00.*

Small sections of the class are given lectures and quizzes on anatomy and physiology of the eye, ear, nose, and throat, and practical drill in the use of the ophthalmoscope, otoscope, laryngoscope, rhinoscope, intubation, etc.

Dr. Spencer and Assistants.

## PATHOLOGY

PROFESSOR WHITMAN:—

1. LECTURES. *Both semesters. M. 10:00.*

Lectures and recitations dealing with post mortem technique, and the most important topics of special Pathology.

2. LABORATORY COURSE. *Both semesters, 2 hours per week as arranged.*

Material derived from autopsies and operations is assigned to the students to be worked up, and presented to the class in the form of a report. At the same time the material so used is studied microscopically. Special attention is given to tumors, and the lesions which particularly interest the surgeon. The students are expected to do their own cutting, staining, etc., at such times as may be convenient, the two hours scheduled being entirely devoted to the consideration of the reports.

Text-books: Ziegler, Adami, Mallory and Wright, Current Medical Literature.

## PHYSIOLOGY

PROFESSOR VAN ZANT:—

1. PATHOLOGICAL PHYSIOLOGY. *First semester. M. 4:00.*

Lectures covering the field of perverted action and function of diseased organs.



## HYGIENE

PROFESSOR BYLES:—

1. LECTURES. *Both semesters. W. 4:00.*

## MEDICAL JURISPRUDENCE

PROFESSOR JAMES H. PERSHING AND DR. WHITE:—

1. LECTURES. 1 h. as arranged.

## TOXICOLOGY

PROFESSOR HILL:—

1. LECTURES. *Both semesters. F. 8:00.*

## DERMATOLOGY AND GENITO-URINARY DISEASES

PROFESSORS WIEST, DAVIS, BLAINE, AND DOCTORS MARKLEY AND LYONS:—

1. LECTURES. *Both semesters. 1 h. as arranged.*

These lectures cover diseases of the skin and the genito-urinary system.

Text-books: Dermatology, Crocker, Stelwagen, \$6.00; Pussey, Schamber, Ohmann-Dumesnil. Genito-urinary diseases, Keyes, Gourlay.

## FOURTH YEAR (AT DENVER)

## MEDICINE

PROFESSORS CATTERMOLLE, ARNEILL, GILBERT, PEEBLES, SEWALL, ROTHWELL, HALL, SHOLLENBERGER, WHITNEY, BONNEY, AND DOCTORS EMORY, ARNDT, OLMSTED AND BYLES:—

1. THEORY AND PRACTICE. *Both semesters. Th. 2:00.*

Lectures continuing the similar course given in the third year.  
Professors Peebles and Rothwell.

2. PEDIATRICS. *Both semesters. W. 11:00.*

Lectures in which infant feeding and the important diseases of childhood are covered.

Professors Cattermole and Whitney.

3. CASE TEACHING. *Both semesters. M. 10:00.*

In this course special attention is paid not only to diagnosis but to the therapeutic principles and remedies suited to the case under discussion.

Professor Gilbert and Dr. Emory.

4. DIETETICS. *Both semesters. W. 2:00.*

This is a lecture course covering the physiology of digestion, physiological and pathological metabolism, and application to specific pathological conditions.

Professor Peebles.

5. CLINICS AND CLINICAL CONFERENCES. *Both semesters. Tu. F. 8:00 to 10:00.*

Patients are assigned to each student who presents a detailed study of the case for discussion at a clinical conference.

Professors Arneill, Sewall, Hall, and Doctors  
Arndt, Olmstead, Byles, and Sharpley.

6. DISPENSARY WORK. *Daily for six weeks. 12:00 to 2:00.*

This course consists in section work conducted by the students under instruction of the staff.

Professors Arneill and Sewall and Assistants.

Text-books: Edwards, \$5.50; Osler, \$5.50; Anders, \$5.50; Tyson, Holt, \$6.00; Friedenwald and Rührhah.

Reference books: Albutt's System, Osler's Modern Medicine, Nothnagel's Encyclopedia of Practical Medicine (American Edition), Forcheimer's The Prophylaxis and Treatment of Internal Diseases, Current Medical Literature.

## NEUROLOGY AND PSYCHIATRY

PROFESSORS NEUHAUS, H. T. PERSHING, HOPKINS AND DOCTORS  
DELEHANTY, OETTINGER, C. L. PERSHING, AND LAZELL:—

1. NEUROLOGY AND PSYCHIATRY. *Both semesters. Tu. F. 2:00.*

The lectures cover the subject of psychiatry, following Kræpelin's text-book, psycho-neuroses, and the principles of psychotherapy; and the organic diseases of the peripheral nerves, spinal cord and brain.

Professor Pershing and Dr. Delehanty.

2. CLINICS. *Both semesters. Th. 8:00 to 10:00.*

Patients are assigned to each student who presents a detailed study of the case for discussion at a clinical conference.

Professor Hopkins, and Doctors Oettinger,  
C. L. Pershing, Lazell and Delehanty.

3. DISPENSARY WORK. *Daily for six weeks.* 12:00 to 2:00.

This course consists in section work conducted by the students under instruction of the staff.

Professor Neuhaus and Assistants.

## SURGERY

PROFESSORS GIFFIN, CRAIG, CORWIN, LYMAN, ROGERS, FREEMAN, POWERS, HARVEY, PACKARD, ASSISTANT PROFESSOR BUCHTEL, AND DOCTORS MCGRAW, PERKINS, DEAN, AND WILLIAMS:—

1. LECTURES. *Both semesters.* Tu. W. Th. 10:00.

This course includes fractures and dislocations, tumors and injury to the abdomen, surgery of the breast and amputations, surgery of the intestines, liver, spleen and pancreas, genito-urinary surgery, surgery of the head, neck, rectum, and orthopedic surgery.

Professors Giffin, Craig, Corwin, Lyman,  
Rogers, Freeman and Packard.

2. CLINICS. *Both semesters.* W. S. 8:00 to 10:00.

Professors Craig, and Lyman, and Doctors McGraw,  
Perkins, Dean, and Williams.

3. DISPENSARY WORK. *Daily for six weeks.* 12:00 to 2:00.

The course consists in section work conducted by the students under the instruction of the staff.

Professors Craig, Lyman, Rogers, Freeman,  
Powers and Packard and Assistants.

## GYNECOLOGY

PROFESSORS ELDER, HAWKINS, JAYNE AND DOCTORS OPPENHEIM, STRATTON, INGRAHAM, FRASER, AND PRESTON:—

1. LECTURES. *Both semesters.* F. 11:00

The lectures will cover the subject of the diseases of the female pelvis.

Professor Elder.

2. CLINICS. *Both semesters.* M. 8:00 to 10:00.

Professors Elder and Jayne and Dr. Preston.

3. DISPENSARY WORK. *Daily for six weeks.* 12:00 to 2:00.

The course consists in section work by the students under the instruction of the staff.

Professor Jayne and Assistants.

## OBSTETRICS

PROFESSORS McNAUGHT, HUTCHISON AND BURNS, AND ASSISTANTS:—

1. LECTURES.—*Both semesters. Tu. 11:00. F. 10:00.*

The lectures cover the ground of abnormal pregnancy, labor, and puerperium, completing the course begun in the third year.

Professors McNaught and Burns.

2. CLINICAL COURSE. *Irregular.*

In addition to clinics and demonstrations at the hospitals, each student is required personally to deliver ten cases.

Professors Hutchison and Assistants.

Text-books: Edgar, \$6.00; Hirst, \$5.00.

## OPHTHALMOLOGY

PROFESSORS CHASE, JACKSON, COOVER AND ASSISTANTS:—

1. DISPENSARY WORK. *Daily for three weeks. 12:00 to 2:00.*

The course consists in section work conducted by the students under the instruction of the staff.

## OTOLOGY

PROFESSORS FOSTER, BANE AND ASSISTANTS:—

1. DISPENSARY WORK. *Daily for three weeks. 12:00 to 2:00.*

The course consists in section work conducted by the students under the instruction of the staff.

## LARYNGOLOGY AND RHINOLOGY

PROFESSORS WAXHAM AND LEVY, AND ASSISTANTS:—

1. DISPENSARY WORK. *Daily for six weeks. 12:00 to 2:00.*

The course consists in section work conducted by the students under the instruction of the staff.

2. GENERAL CLINICS. *Both semesters. S. 10:00 to 12:00.*

In addition to the above dispensary sections, a general clinic at the County Hospital, once each week in diseases of the eye, ear, nose and throat, at which are shown cases which could not be properly treated in the Dispensary. The clinics are held by the members of the Faculty and Clinical Staff, proper to the case under consideration.

## DERMATOLOGY AND GENITO-URINARY DISEASES

DOCTORS MARKLEY AND LYONS:—

1. DISPENSARY WORK. *Daily for six weeks.* 12:00 to 2:00.

The course consists in section work conducted by the students under the instruction of the staff.

# UNIVERSITY HOSPITAL

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The State Hospital is located on high ground overlooking the city of Boulder, having an unobstructed view of the mountains and the beautiful Boulder Valley. Being upon high ground, excellent drainage is assured. The building is heated with hot water throughout, on the plan known as the direct-indirect system. The ventilation is excellent. Every room is so located that it receives the direct rays of the sun.

There are two general wards, one for women, having ten beds; the other for men, having twenty beds. Aside from the general wards, are commodious private wards which are furnished with the purpose of presenting all the comforts of home with the added convenience of a hospital and care by skilled attendants.

The physicians for the general wards are selected from the faculty of the department of Medicine. Patients occupying the private rooms may employ any reputable physician whom they may elect. Any physician may place his patient in one of the private rooms and continue in charge of the case.

Many forms of disease are of such a nature that the patient cannot well be treated and cared for at home, or the patient may be without home care. Any such case may be sent to the Hospital, and, in the private rooms, may be cared for by his own physician if he so elects, or he will be cared for by some member of the staff, selected by the physician referring the case to the Hospital.

## HOSPITAL FEES

Fees in the Hospital are as follows:

General wards, \$12 per week; private rooms, \$18 to \$22 per week; operating room, \$5 to \$10; special nurse, \$20 per week; medicine and dressings at cost.



# UNIVERSITY OF COLORADO TRAINING SCHOOL FOR NURSES

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The University of Colorado Training School for Nurses, which has been in successful operation for the past nine years, offers a thorough course of training to young women who desire to enter the profession of nursing. The course of instruction comprises: Practical work in the wards; theoretical work in class, and lectures; lessons in cooking; training school administration.

For admission, a certificate of moral character must be presented from two reliable persons of the place in which the applicant last resided, and a certificate of health from a physician. Evidence of at least two years' work in a high school, or equivalent, is required. The applicant must not be less than nineteen or more than thirty years of age. Applicants may be admitted at any time when a vacancy exists.

The applicant is received on probation for three months. During this period she receives room, board and a reasonable amount of laundry service. Upon the completion of the probationary period, if her work has been satisfactory to the Superintendent, she is retained as a pupil. Pupils receive \$8.00 per month. This sum is allowed for the dress, text-books and other incidentals, but is not intended as wages. It is considered that the education given is fully equivalent for services. An annual vacation of two weeks is allowed each pupil.

Six lectures are given each week, beginning in September, and continuing until June. There is the usual intermission in lectures at Christmas.

Every applicant for graduation must possess a good moral character. She must have completed the required practical courses, and have passed satisfactory examinations in all the required studies. She must have been a regular member of the Training School for three years. For additional information, address the Superintendent, Jean McIntosh, Boulder, Colorado.

The following is the list of lecturers in the Training School:

JEAN MCINTOSH, Superintendent,  
Ethics of Nursing and Practical Work.

LUMAN M. GIFFIN, M.D.,  
Surgery and Surgical Nursing.

GEORGE H. CATTERMOLLE, M.D.,  
Diseases of Children, Infant Feeding, Children's Nursing.

OSCAR M. GILBERT, M.D.,  
Internal Medicine and General Nursing.

E. BARBER QUEAL, M.D.,  
Physiology and Hygiene.

EDWARD B. TROVILLION, M.D.,  
Anatomy and Histology.

WALTER W. REED, M.D.,  
Obstetric Nursing.

WILLIAM A. JOLLEY, M.D.,  
Materia Medica.

MRS. ESTHER MILLER,  
Massage.

# SCHOOL OF LAW

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## FACULTY AND LECTURERS

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### FACULTY

JAMES H. BAKER, M.A., LL.D., President,

JOHN D. FLEMING, B.A., LL.B., LL.D., Dean,  
Professor of Law; Associate Judge of Practice Court.

MOSES HALLETT, LL.D.,  
Dean and Professor of American Constitutional Law, *Emeritus*.

JOHN CAMPBELL, M.A., LL.B., LL.D.,  
Dean *Emeritus*, Professor of Law of Private and Municipal Corporations.

ALBERT A. REED, LL.B.,  
Professor of Law.

WILLIAM H. BRYANT, B.S., LL.B.,  
Professor of Law,

EDWIN VAN CISE,  
Professor of Law.

WILLIAM H. PEASE, B.A., LL.B.,  
Professor of Law.

JAMES F. WILLARD, Ph.D.,  
Professor of American and English Constitutional and Political History.

FRED G. FOLSOM, B.A., LL.B.,  
Instructor in Law; Judge of Practice Court.

JOSEPH L. KINGSBURY, B.A.,  
Instructor in History.

## LECTURERS

HUGH BUTLER,

Lecturer on Common Law Pleading.

ROBERT S. MORRISON,

Lecturer on Laws of Mines and Mining.

CHARLES S. THOMAS, LL.B.,

Lecturer on Law of Evidence.

LUCIUS M. CUTHBERT, M.A., LL.B.,

Lecturer on Roman Law.

JOHN A. RINER, LL.B.,

Lecturer on International Law.

CHARLES D. HAYT,

Lecturer on Law of Taxation.

WILLARD J. WHITE, M.A., M.D.,

Lecturer on Medical Jurisprudence.

ERNEST L. WILLIAMS, LL.B.,

Lecturer on Appellate Procedure.

JAMES W. MCCREERY,

Lecturer on Law of Irrigation and Water Rights.

JOHN E. ROBINSON,

Lecturer on Bankruptcy.

WILLIAM B. WALDO,

Librarian.

OLIVER C. WILSON, B.A.,

Assistant Librarian.

EUGENE A. BOND,

Assistant Librarian.

WILLIAM R. KENNEDY,

Clerk of the Practice Court.

JOHN S. STIDGER,

Stenographer.

# SCHOOL OF LAW

## STATEMENT

The Law School was opened in September, 1892. The course of study covers three years of thirty-six weeks each. The school is a member of the Association of American Law Schools.

## BUILDING

The School of Law is now occupying its new building. This building contains commodious class rooms, professors' rooms, a moot court room, and a large room for the library. It is the gift of Senator Simon Guggenheim.

## ACADEMIC YEAR

The Academic Year, 1911-1912, will begin on Monday, September 11, 1911.

## ADMISSION

Candidates for a degree must not be less than eighteen years of age upon entering the freshman class. All applicants for admission must present certificates of good moral character.

See page 56 for requirements.

## ADVANCED STANDING

Admission to advanced standing will be allowed to candidates, if otherwise entitled to admission to the School as regular students, who satisfy the faculty that they have made sufficient progress in the study of law.

## SPECIAL NOTICE

Beginning September, 1912, in addition to a standard high-school course, two years of college work will be required for admission.

## SPECIAL STUDENTS

Candidates twenty-one years of age, who cannot satisfy the admission requirements, but are qualified to pursue special work, may be admitted to certain courses with the approval of the Law Faculty.

## DEGREE OF BACHELOR OF LAW

The degree of Bachelor of Laws will be conferred on students who have passed all the examinations of the entire course. The candidate for a degree must have pursued at least one year's course as a resident student. No degree will be conferred until the candidate shall have reached the age of twenty-one years.

## DEVELOPMENT OF THE AMERICAN LAW SCHOOL

Legal education in this country has come to be a matter of law-school instruction. For many years the number of students in law offices has decreased; practicing lawyers have gradually given less and less attention to the instruction of students in their offices. Meanwhile the number of law schools and the number of students in law schools have rapidly increased.

In 1878 there were fifty schools with 3,012 students. According to the report of the United States Commissioner of Education for 1909, there were in 1908-1909 one hundred and nine law schools; the number of students therein was 18,553.

Law schools have not only increased in number and in students, but they have made very general and marked advancement in requirements for admission, and for graduation; in the prescribed course of study; and in methods of instruction. The one-year law school has become constantly rarer and at the time of the above report there were only two remaining in the United States. Now most schools of good standing require at least college matriculation, or its equivalent, as a condition of admission; prescribe a course of study covering three years and occupying all the student's time; and grant the LL.B. degree only after a rigid and searching examination.

## METHOD OF INSTRUCTION

As to methods of instruction, no subject connected with legal education has been the occasion of so much controversy. Three distinct plans are found in use in different institutions:



(a) That most generally adopted may be called the text-book method, and consists of class-room recitations and quizzes upon assigned portions of a legal treatise.

(b) What is known as the "Case-System," as understood and taught at Harvard, originated there more than a quarter of a century ago, and although not in general use, has been gradually adopted to a greater or less extent in a number of the best law schools. It consists of the inductive study of carefully arranged and selected cases. It does not exclude the use of texts and commentaries on the law, by the student in his individual research, but requires no use of them for class-room work.

(c) The teaching of law by lectures has the authority of age, and has been pursued in the profession for hundreds of years, certainly as far back as the reign of Elizabeth, when there were "readers," very important officials, who gave instruction, both in the inns of court, and in the inns of chancery. This plan was pursued in this country also by Judge Wilson of Pennsylvania in 1790 and 1791, afterwards by Chancellor Kent of New York, by the Litchfield Law School, and in the early days of Harvard. At a later period it fell somewhat into disuse and seemed about to be abandoned. Recently it has been regaining lost ground.

Each of these methods has its advantages and limitations, and each its earnest advocates.

Though text-book recitations have been entirely abandoned in some of the best law schools, it may well be doubted whether, by any other means, the beginner in legal studies can so quickly acquire an accurate and systematic knowledge of legal principles as by the study of the *best*, and only the best, text-books and commentaries. Were that the sole object of the student, there could be no better method. The purpose, however, of legal study, is to make a lawyer, and the mere knowledge of legal principles falls far short of converting the law student into a lawyer. In addition, there must be a marked development in the man himself; he must learn to think independently, to weigh authorities, to deduce principles from adjudications, to carefully discriminate in their application, to appreciate the *ratio decidendi*. In no other way can he make the intellectual stride so surely as by careful study and analysis of well-selected precedents, followed by earnest class-room discussion and debate, presided over by the instructor, upon the application of the principles involved. In such work the student's mental attitude is active and largely that of

an independent investigator. Each step requires thought, actual mental effort, and so results in mental development. His work is done with a sense of responsibility, and so is thorough. He becomes inured to an atmosphere of mental antagonism and criticism, and soon learns to defend his position with good temper and some skill, and perhaps, to detect the flaw in his opponent's argument. Step by step he is growing into a lawyer. Such, fairly considered, are the merits of the "Case System." Perhaps its advantages can be best derived by a student who has been previously prepared for such work by the study of good text-books.

The law lecture, which has so well withstood the test of time, is not to be ignored or depreciated. When delivered by a really eminent specialist, a man of magnetic and intellectual force, it brings both legal principles and reasoning home to the mind of the attentive student, with a vividness and force that stimulates his thought and vitalizes his reading. The personality of the lecturer, and the previous training of the student are all important factors of success.

These considerations have induced the Faculty of the Colorado School of Law to adopt a scheme of instruction which involves the employment of all three systems. Much of the first year's work consists of class-room recitations from standard text-books; some time is given to lectures; and the student makes his first trial of case study, the work being limited in amount and graduated to the progress of the class. In the second year, the bulk of the work is done with cases, though text-books and lectures are not altogether disused. In the third year, cases are still used, but the proportions are reversed. There are a few courses of case work, text-books being disused in the class-room, and many courses of lectures. These are delivered by some of the most eminent members of the profession in Colorado, to students who have been prepared and seasoned by two years' hard study of text-books and cases.

Thus the scheme of instruction is composite, and designed to secure a maximum of the excellence while accompanied by a minimum of the faults of each of the three methods.

### COURSE OF STUDY

It is the purpose of the School to afford such training in the fundamental principles of the English and American law as will thoroughly prepare the student to practice his profession with credit in any state or country where this law prevails.

The course of study occupies the student three years of nine months each, and is so arranged as to require a minimum of fifteen hours of actual recitations and lectures each week from each class. The prescribed course comprises the subjects that follow:

## FIRST YEAR.

1. CIVIL PROCEDURE AT COMMON LAW. Professor Fleming.  
Martin on Civil Procedure; Keen's cases.
2. CRIMINAL LAW AND PROCEDURE. Professor Reed.  
May's Criminal Law; Chapin's Cases.  
Lectures at appointed hours by Mr. Harry S. Silverstein.
3. CONSTITUTIONAL HISTORY OF ENGLAND. Professor Willard.
4. CONTRACTS. Professor Pease.  
Hammon on Contracts, and selected cases.
5. ELEMENTARY LAW. Professor Pease.  
Blackstone's Commentaries.
6. PERSONAL PROPERTY. Professor Reed.  
Shouler on Personal Property.
7. POLITICAL AND CONSTITUTIONAL HISTORY OF THE UNITED STATES.  
Professor Willard.
8. REAL PROPERTY. Professor Pease.  
Tiffany on Real Property.
9. TORTS. Professor Reed.  
Cooley on Torts; Burdick's Cases on Torts.

## SECOND YEAR.

1. AGENCY. Professor Fleming.  
Huffcutt's Cases on Agency, 2nd Edition.
2. BAILMENTS AND CARRIERS. Professor Folsom.  
Hale on Bailments and Carriers.  
Selected and Colorado Cases.
3. BILLS AND NOTES. Professor Reed.  
Bigelow on Bills and Notes; Bigelow's Cases on the Law of Bills, Notes and Checks. Colorado Negotiable Instruments Law.
4. CIVIL PROCEDURE UNDER THE CODE. Professor Van Cise.  
Colorado Code of Civil Procedure and Selected Cases. Lectures at appointed hours.

5. DAMAGES. Professor Reed.  
Sedgwick's Elements of Damages.
6. DOMESTIC RELATIONS. Professor Reed.  
Woodruff's Cases on Domestic Relations.
7. EVIDENCE. Professor Pease.  
Reynolds on Evidence; Thayer's Cases on Evidence.  
Lectures also delivered on this subject by Mr. Charles S. Thomas.
8. EQUITY JURISPRUDENCE. Professor Pease.  
Bispham's Principles of Equity and Selected Cases.
9. EQUITY PLEADING AND PRACTICE. Professor Pease.  
Fletcher's Equity Pleading and Practice.
10. PLEADING AND PRACTICE UNDER THE CODE. Professor Folsom.  
This course covers the work in the Practice Court described below.
11. REAL PROPERTY. Professor Pease.  
Gray's Cases on Property.  
Tiffany on Real Property.
12. QUASI-CONTRACTS. Professor Reed.  
Selected Cases.

#### THIRD YEAR.

1. APPELLATE PRACTICE. Mr. Ernest L. Williams.  
Lectures at appointed hours; illustrative cases.
2. COMMON LAW PLEADING. Mr. Hugh Butler.  
Lectures at appointed hours.
3. CONSTITUTIONAL LAW. Professor Fleming.  
Constitutional Law in U. S., McClain; McClain's Cases, 2d Edition.  
Also lectures at appointed hours by Judge Hallett.
4. CONFLICT OF LAWS. Professor Fleming.  
Minor's Conflict of Laws; selected cases.
5. CONVEYANCING AND ABSTRACTS OF TITLE. Professor Pease.  
Lectures at appointed hours.

6. CORPORATIONS. Professor Reed.  
Warren's Cases on Private Corporations.  
Lectures on Private and Municipal Corporations at appointed hours by Hon. John Campbell.
7. INTERNATIONAL LAW. Hon. John A. Riner.  
Lectures at appointed hours.
8. EXTRAORDINARY REMEDIES. Professor Van Cise.  
Colorado Code Civil Procedure. Selected Cases.
9. INSURANCE. Professor Fleming.  
Lectures at appointed hours. Illustrative cases.
10. IRRIGATION, WATER RIGHTS AND RIPARIAN PRIVILEGES. Professor Fleming.  
Mills' Irrigation Manual.  
Mr. James W. McCreery lectures at appointed hours.
11. LEGAL ETHICS. Hon. John A. Riner.  
Lectures at appointed hours.
12. MEDICAL JURISPRUDENCE. Dr. Willard J. White.  
Lectures at appointed hours.
13. MINES AND MINING. Professor Bryant and Professor Fleming.  
Selected Cases; Morrison's Mining Rights.  
Mr. Robert S. Morrison lectures at appointed hours.
14. MUNICIPAL CORPORATIONS. Professor Reed.  
Smith's Cases on Municipal Corporations.
15. PARTNERSHIP. Professor Reed.  
Mechem on Partnerships.
16. PLEADING AND PRACTICE UNDER THE CODE. Professor Folsom.  
This course covers the work in the Practice Court described below.
17. REAL PROPERTY. Professor Pease.  
Gray's Cases on Property; Tiffany on Real Property.
18. SALES. Professor Fleming.  
Williston's Cases on Sales of Personal Property. 2d Edition.
19. TAXATION. Mr. Charles D. Hayt.  
Lectures at appointed hours.



20. TRUSTS. Professor Van Cise.  
Selected Cases.
21. WILLS, EXECUTORS AND ADMINISTRATORS. Professor Fleming.  
Costigan's Cases on Wills; Colorado Wills and Administration Act 1903, and selected cases.
22. ROMAN LAW. Mr. Lucius M. Cuthbert.  
Lectures at appointed hours.
23. MENTAL ALIENATION.  
Lectures at appointed hours.
24. BANKRUPTCY. Mr. John E. Robinson.  
Lectures and selected cases.
25. BRIEF MAKING AND USE OF LAW BOOKS. Mr. Fred G. Folsom. Abbott.  
This course covers work in Moot and Practice Court mentioned below.

### TEACHING PRACTICE

The transfer of legal education from the office to the law school has been marked by a great gain in thoroughness and fullness. But the loss of the training in practice afforded by the business of the office is much to be regretted. It provided the student a sort of law clinic, the want of which must now be supplied by the law school if his legal education is to be complete. He must not only be taught the principles of procedure in all its branches, jurisdiction, pleading, evidence, trial and appellate relief, but he should see these principles in actual practical application. To some extent he may do this by attendance upon the courts and close observation and study of the proceedings there. But, beside being a silent spectator in public courts, the student should have a court of his own, where he may devise remedies, sue out process, draw pleadings, prepare instructions, make briefs and argue questions of law—and perhaps of fact—frame record entries, save exceptions, and preserve them in the record, and take the case up on error, or by appeal. To supply this need, the Regents of the University have authorized a Practice Court, presided over by a Professor of Practice. A court room, including a Clerk's office, has been provided; and the records and files are kept and the proceedings of the court conducted in conformity with usage and practice in the District Courts in Colorado.



The following, briefly stated, is the course of procedure: The Second-Year Class and Third-Year Class are divided into groups of four students; to each group is assigned a carefully prepared case, the facts of which are so stated as, when properly pleaded, to present an issue of law; two of the group are counsel for plaintiff and two for defendant. Counsel for plaintiff devise the remedy, sue out process, superintend its proper service and draw the complaint. Defendant's counsel may demur, move to strike out, or to make more definite and certain, or to quash the process, or plead, as they see fit. Every step, however, is subject to the supervision of the Professor of Practice, and he may require errors to be corrected at once, or leave them in his discretion, to the attention of the opposing counsel. Every record entry occasioned by any step taken by counsel must be drafted by them and submitted to the clerk. He requires the correction of any error or insufficiency, and the entry is then made upon the record by a deputy clerk, selected from the students. When the case is at issue, it is set for trial, or hearing before the Professor of Practice sitting as Judge of the Practice Court. In proper cases appeal is allowed to a court specially organized for the purpose.

It is intended that each student shall participate in the conduct to final judgment, of at least three cases, in each of the second and third years of his course.

### INSTRUCTION IN OTHER DEPARTMENTS OF THE UNIVERSITY

The instruction given in other departments of the University is open also to students of the Law School, subject to the approval of the law faculty. Among the numerous courses, those upon Political Economy, Geology, Mineralogy, History, Oratory and Debate, are particularly recommended for law students.

### THE LIBRARY

The University Library, open to students of all departments, contains 56,000 bound volumes.

The Law Library contains several sets of English and American reports, the digests, including the Century Digest, and a well-selected collection of text-books, and is increased each year under special appropriations by the Regents for that purpose. Several of the leading law journals, American and English, are regularly taken and are on file.

The students of the Law School, although they will not be allowed to take books from the law library of the Supreme Court of the State at Denver, will be allowed free access during hours when the library is open.

The members of the Boulder bar have generously granted the use of their libraries to the students of the School.

#### THE C. I. THOMSON COLLECTION.

An accession of one thousand volumes, chiefly reports, from the library of the late Judge C. I. Thomson, the gift of his widow, has been lately made to the law library. The volumes are known and catalogued as the "C. I. Thomson Collection."

#### FEEES

Students pay an annual tuition fee of \$50.

#### ADDITIONAL INFORMATION

For further information inquire of

JOHN D. FLEMING,

Dean, Colorado School of Law.

*Boulder, Colorado.*

## SUMMER SESSION

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The eighth Summer Session opens June 19 and closes July 29, 1911.

Instruction by specialists will be given in all collegiate departments.

Besides the advantages of the formal courses, open lectures of general and special interest will be given during the summer session.

The faculty will consist of regular members of the University staff and professors from other institutions of equal rank. The standard of the work will be the same as that maintained during the regular academic year, and credits toward a degree will be given for courses satisfactorily completed.

A fee of \$10 will be charged for a single course, and \$15 for two or three courses.

Full information regarding the summer work is published in the regular Summer Session Bulletin. For this apply to the Secretary of the University, Boulder, Colorado.



# CATALOGUE OF STUDENTS

## GRADUATE SCHOOL

| NAME.                                                      | UNIVERSITY RESIDENCE.                  |
|------------------------------------------------------------|----------------------------------------|
| Bell, Cleophile, B.A., M.A....Boulder, Colo.....           | 1931 Hill St.                          |
| University of Colorado, 1908, 1909.                        |                                        |
| Comparative Literature, English Literature, German.        |                                        |
| Bliss, Frederick Van Ostrand, B.S. (E.E.) .Boulder, Colo.. | 2431 Hill St.                          |
| University of Colorado, 1907.                              |                                        |
| Electricity, Mathematics.                                  |                                        |
| Boswell, Fannie Judith, B.A., M.A.....                     | Parker, Colo.....1040 11th St.         |
| University of Colorado, 1910.                              |                                        |
| English, Comparative Literature.                           |                                        |
| Brackett, William Raymond, B.A.....                        | Boulder, Colo.....2455 12th St.        |
| University of Colorado, 1905.                              |                                        |
| Electricity, Mechanical Engineering, Physics.              |                                        |
| Butters, Roy Morrill, B.A.....                             | Denver, Colo.....1083 14th St.         |
| University of Colorado, 1909.                              |                                        |
| Geology, Paleontology, Surveying.                          |                                        |
| Coffman, Blanche Arizona, B.S.....                         | Malvern, Ia.....1143 Broadway          |
| Parsons College, 1909.                                     |                                        |
| Literature, History, Philosophy.                           |                                        |
| Cole, Katherine Burgie, Ph.B.....                          | Chicago, Ill.....1165 12th St.         |
| University of Chicago, 1909.                               |                                        |
| English Literature, Sociology.                             |                                        |
| Cooper, Elva, B.A., M.A.....                               | Boulder, Colo.....1243 Grand View Ave. |
| University of Wisconsin, 1904, 1906.                       |                                        |
| Mathematics.                                               |                                        |
| Cunningham, William S., B.S....                            | Durango, Colo....Boulderado Hotel      |
| University of Colorado, 1903.                              |                                        |
| Chemistry, Geology.                                        |                                        |
| Dean, Paul Marshall, B.A....                               | Denver, Colo....1045 Pennsylvania Ave. |
| University of Colorado, 1908.                              |                                        |
| Chemistry, Physics, Geology.                               |                                        |

| NAME.                                           | UNIVERSITY RESIDENCE.                                                                                                                         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Doolittle, Frederick William, B.A., B.S. (C.E.) | Hopkinton, Ia.<br>Princeton, 1905; University of Colorado, 1907.<br>Physics, Mathematics, Mechanics.                                          |
| Duff, Carl Mathias, B.S. (C.E.)                 | .....Versailles, Mo.....1143 12th St.<br>University of Colorado, 1910.<br>Civil Engineering.                                                  |
| Dunham Clifford Scott, B.A.                     | .....Boulder, Colo.....1315 11th St.<br>Iowa State Teachers' College, 1906, University of<br>Colorado, 1910.<br>Psychology, Music, Sociology. |
| Dunklee, Edward Vaughan                         | .....Denver, Colo.....973 14th St.<br>Sociology, Psychology, Philosophy.                                                                      |
| Elden, Laeta, B.A.                              | .....Boulder, Colo.....1034 Pine St.<br>University of Colorado, 1901.<br>Literature, History.                                                 |
| Ellis, Erl Hubert, B.A.                         | .....Boulder, Colo.....1830 16th St.<br>University of Colorado, 1910.<br>Mathematics, Physics.                                                |
| Fertig, Jerome Henry, B.S. (C.E.)               | .....Montrose, Colo.<br>University of Colorado, 1903.<br>Civil Engineering.                                                                   |
| Ford, Ethel Rosina, B.A.                        | .....Boulder, Colo.....404 Marine St.<br>University of Colorado, 1910.<br>Literature, English.                                                |
| Grant, Anna May, B.A.                           | .....Boulder, Colo.....1818 16th St.<br>University of Colorado, 1902.<br>Philosophy, Greek, Economics.                                        |
| Hunting, Bertha Harriet, B.A.                   | .....Boulder, Colo.....2213 Hill St.<br>University of Colorado, 1910.<br>Literature, Psychology, Sociology.                                   |
| Huntington, Whitney Clark, B.S. (C.E.)          | .....Denver, Colo.....<br>University of Colorado, 1910.<br>1210 Pleasant St.<br>Civil Engineering, Physics, Mathematics.                      |
| Jackson, Bethell Howard, M.E., M.A.             | .....Boulder, Colo...1036 14th St.<br>Stevens Institute of Technology, 1895; University<br>of Colorado, 1906.<br>Geology.                     |
| Jacobucci, Joseph Harry, B.S. (E.E.)            | .....Rawlins, Wyo., Box 72.<br>University of Colorado, 1908.<br>Electrical Engineering.                                                       |



| NAME.                                         | UNIVERSITY RESIDENCE.                  |
|-----------------------------------------------|----------------------------------------|
| Jones, Easley Stephen, B.A., M.A.....         | Boulder, Colo.....987 15th St.         |
| University of Colorado, 1907, 1909.           |                                        |
| English Literature, Philosophy.               |                                        |
| Kesner, Harry James, B.A., B.S. (C.E.)..      | Berkeley, Cal.                         |
| University of Colorado, 1905, 1907.           |                                        |
| Civil Engineering.                            |                                        |
| Lakenan, Mary Emily McCue, B.A...             | Boulder, Colo..956 Marine St.          |
| University of Colorado, 1910.                 |                                        |
| Psychology, Literature.                       |                                        |
| Lauer, Arnold William, Ph.B.....              | Norman, Okla.....1059 14th St.         |
| University of Iowa, 1904.                     |                                        |
| Geology, Chemistry.                           |                                        |
| Lightbourn, Grace Thorndyke, B.A...           | Central City, Colo.....                |
| University of Colorado, 1908.                 | Boulderado Hotel                       |
| Philosophy.                                   |                                        |
| Macaulay, Ines Stearns, B.A.....              | Boulder, Colo.....932 15th St.         |
| University of Colorado, 1910.                 |                                        |
| English Literature, Economics.                |                                        |
| McArthur, Mildred Sherwood, B.A., M.A...      | Troy, N. Y...1107 13th St.             |
| Cornell University, 1908, 1909.               |                                        |
| German, Middle High German, Icelandic.        |                                        |
| Morrill, Joseph Bradley, B.S. (E.E.)..        | Golden, Colo..1210 Pleasant St.        |
| University of Colorado, 1910.                 |                                        |
| Electrical Engineering, Physics, Mathematics. |                                        |
| Moys, May Adelaide.....                       | Boulder, Colo.....421 Pine St.         |
| Greek, Latin, German.                         |                                        |
| Murdock, Harvey Ellison, B.S. (M.E.), M.E...  | Urbana, Ill.                           |
| University of Colorado, 1906, 1908.           |                                        |
| Civil Engineering.                            |                                        |
| Parker, Orpha May, B.A.....                   | Boulder, Colo.....1076 12th St.        |
| University of Colorado, 1910.                 |                                        |
| Literature, Education.                        |                                        |
| Parrett, Harry Dane, B.A...                   | Washington C. H., Ohio..952 Marine St. |
| Ohio Wesleyan University.                     |                                        |
| History, Sociology.                           |                                        |
| Person, Fred Gilman, B.A.....                 | Fort Collins, Colo.                    |
| University of Colorado, 1905.                 |                                        |
| Physics, Chemistry.                           |                                        |

| NAME.                                     | UNIVERSITY RESIDENCE.                                                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Poe, Charles Franklin.....                | Greeley, Colo.....1706 Athens St.<br>Bacteriology, Chemistry.                                                                 |
| Puffer, Rodney Arthur, Ph. B....          | Kalamazoo, Mich....City Y. M. C. A.<br>Kalamazoo College, 1909.<br>History, Mathematics.                                      |
| Reynolds, William LeRoy, B.S. (C.E.)..... | Denver, Colo.<br>University of Colorado.<br>Civil Engineering.                                                                |
| Robbins, Wilfred William, B.A., M.A....   | Boulder, Colo...<br>University of Colorado, 1907, 1908.<br>1220 Grand View Ave.<br>Botany, Zoology.                           |
| Salomon, Carl Emanuel, B.A....            | Berthoud, Colo....421 Highland Ave.<br>University of Colorado, 1910.<br>Literature, Latin.                                    |
| Seely, Marie Waterbury.....               | Boulder, Colo.....1117 Pine St.<br>Literature.                                                                                |
| Shelledy, Ruth Marguerite, B.A.....       | Boulder, Colo.....932 15th St.<br>University of Colorado, 1910.<br>German Literature.                                         |
| Shelton, Whitford Huston, Ph.B., M.A..... | Indianola, Ia.....<br>Simpson College, 1905; University of<br>1100 Pennsylvania Ave.<br>Colorado, 1910.<br>Romance Languages. |
| Shufelt, Gladys Elizabeth, B.S., M.A....  | Boulder, Colo....R. F. D. No. 2<br>Union College, Nebraska, 1907; University of<br>Colorado, 1910.<br>Mathematics, Physics.   |
| Simmering, Siebelt Luke, B.S. (M.E.)..... | Boulder, Colo.....<br>University of Colorado, 1910.<br>1146 Euclid Ave.<br>Mechanical Engineering.                            |
| Skinner, James Dudley, Ph.B.....          | Denver, Colo.<br>Yale University.<br>Mechanical Engineering.                                                                  |
| Smith, Guy Watson, B.S. (E.E.), M.S....   | Castle Rock Colo.....<br>University of Colorado, 1908, 1909.<br>1045 Pennsylvania Ave.<br>Mathematics.                        |
| Stocker, Edward C., B.S. (E.E.)..         | Boulder, Colo.....<br>University of Wisconsin, 1909.<br>1115 Grand View Ave.<br>Civil Engineering.                            |

| NAME.                                         | UNIVERSITY RESIDENCE.               |
|-----------------------------------------------|-------------------------------------|
| Sullivan, George Leonard, B.S. (M.E.) M.E.... | Jackson, Neb.....                   |
| University of Nebraska, 1908; University of   | 1061 10th St.                       |
| Colorado, 1910.                               |                                     |
| Physics, Mathematics.                         |                                     |
| Swayne, Josephine Bacon, B.A., M.A....        | Boulder, Colo.....                  |
| University of Missouri, 1880, 1884.           | 930 Lincoln Place                   |
| History of Art.                               |                                     |
| Sweeney, Mabel Emilie.....                    | Denver, Colo.....1165 13th St.      |
| Philosophy, Education, English.               |                                     |
| Thielen, Gertrude Hendrie.....                | Leadville, Colo.....1229 13th St.   |
| Mathematics, German, Education.               |                                     |
| Tilley, Maurine, B.A.....                     | Hamilton, Mo.....1080 10th St.      |
| Mt. Holyoke, 1908.                            |                                     |
| Education, German.                            |                                     |
| Tourtellotte, Louise Lucretia, B.A....        | Denver, Colo.....1229 13th St.      |
| University of Colorado, 1910.                 |                                     |
| Botany, Education.                            |                                     |
| Trowbridge, Mary.....                         | Boulder, Colo.....904 Mapleton Ave. |
| Biology, Literature.                          |                                     |
| Underhill, Olive Lorena, Ph.B.....            | Pueblo, Colo.....1233 Broadway      |
| University of Chicago, 1909.                  |                                     |
| Philosophy, English Literature, Psychology.   |                                     |
| Watkins, Warren Elmer, B.S.....               | Anthony, Kan.....1719 12th St.      |
| Kansas State Agricultural College, 1906.      |                                     |
| Botany, Entomology.                           |                                     |
| Woods, Alice Rudersdorf, B.A.....             | Boulder, Colo.....1515 9th St.      |
| Nebraska University, 1909.                    |                                     |
| English Literature, History.                  |                                     |
| Woods, Harland Clark, B.S. (C.E.)....         | Boulder, Colo....1515 9th St.       |
| Nebraska University, 1909.                    |                                     |
| Civil Engineering.                            |                                     |
| Worcester, Philip George, B.A.....            | Boulder, Colo.....1065 11th St.     |
| University of Colorado, 1909.                 |                                     |
| Geology, Paleontology, Surveying.             |                                     |

# COLLEGE OF LIBERAL ARTS

## SENIOR CLASS

| NAME AND HOME RESIDENCE.                     | UNIVERSITY RESIDENCE. |
|----------------------------------------------|-----------------------|
| Armor, William Roy.....<br>Denver.           | Men's Dormitory       |
| Aurand, Harry Albert.....<br>Denver.         | 928 University St.    |
| Banks, Lee Frazer.....<br>Denver.            | 1229 University St.   |
| Barrows, John Stockbridge.....<br>Denver.    | 1210 Pleasant St.     |
| Bell, Geneva Mable.....<br>Boulder.          | 1931 Hill St.         |
| Belser, Louise Hulda.....<br>Boulder.        | 1107 13th St.         |
| Berg, Louise Marie.....<br>Aspen.            | 1044 University St.   |
| Brown, Helen Mar.....<br>Boulder.            | 1123 Spruce St.       |
| Burger, Abraham M.....<br>Boulder.           | 955 Regent St.        |
| Cary, Guy Clifton.....<br>Boulder.           | 930 14th St.          |
| Chase, Reginald Leighton.....<br>Denver.     | 1165 13th St.         |
| Cody, Mary Elizabeth.....<br>Central City.   | 1521 9th St.          |
| Cragin, Harold P.....<br>New York, New York. | 1210 Pleasant St.     |
| Curtis, David Llewellyn.....<br>Castle Rock. | 1024 University St.   |
| Cuthbertson, Helen Scott.....<br>Pueblo.     | 1061 12th St.         |
| DeVoss, J. Clarence.....<br>Boulder.         | 1327 6th St.          |
| Dier, Carol Althea.....<br>Golden.           | 1229 13th St.         |

| NAME AND HOME RESIDENCE.        | UNIVERSITY RESIDENCE.  |
|---------------------------------|------------------------|
| Downing, Alice .....            | 1221 University St.    |
| Aspen.                          |                        |
| Dunklee, Edward Vaughan.....    | 973 14th St.           |
| Denver.                         |                        |
| Dyer, Eloie Churchill.....      | 417 Mapleton Ave.      |
| Boulder.                        |                        |
| Fairchild, Grace Margaret.....  | 1121 13th St.          |
| Victor.                         |                        |
| Fleming, Edith.....             | 1083 13th St.          |
| Montrose.                       |                        |
| Ford, Marjorie Smith.....       | 1221 University St.    |
| Denver.                         |                        |
| Foster, Faith Estelle.....      | 897 15th St.           |
| Boulder.                        |                        |
| Giacomini, Lawrence George..... | 1131 University St.    |
| Sterling.                       |                        |
| Gill, Florence Montgomery.....  | 1802 Water St.         |
| Gulch.                          |                        |
| Groom, Emma.....                | North 26th St.         |
| Boulder.                        |                        |
| Habermann, Caroline Louise..... | 716 Marine St.         |
| Rico.                           |                        |
| Hall, Felicia Grace.....        | 615 Highland Ave.      |
| Boulder.                        |                        |
| Harding, Mildred Delta.....     | 1100 Pennsylvania Ave. |
| Boulder.                        |                        |
| Hawes, Edith May.....           | 1197 9th St.           |
| Longmont.                       |                        |
| Healy, Harold Harris.....       | 1005 12th St.          |
| Denver.                         |                        |
| Henderson, Ruth Fenton.....     | 1165 12th St.          |
| Cleveland, Ohio.                |                        |
| Hill, Frank Allen.....          | 1149 12th St.          |
| Grand Junction.                 |                        |
| Hinkle, Lawrence Earl.....      | 1004 14th St.          |
| Alamosa.                        |                        |
| Holmes, Marion Helen.....       | 1229 13th St.          |
| Milwaukee, Wisconsin.           |                        |
| Howe, Frank Bonar.....          | 1145 Grand View Ave.   |
| Colorado Springs.               |                        |
| Huber, Gertrude Selina.....     | 1121 13th St.          |
| Denver.                         |                        |
| Huffsmith, Charles Otis.....    | 1441 12th St.          |
| Greeley.                        |                        |

| NAME AND HOME RESIDENCE.                           | UNIVERSITY RESIDENCE.  |
|----------------------------------------------------|------------------------|
| Hyde, Louise.....<br>Boulder.                      | 845 12th St.           |
| Jackson, Emma Albertina.....<br>Red Oak, Iowa.     | 1044 University St.    |
| Kesner, Ada Charlotte.....<br>Salida.              | 1325 Broadway          |
| Kilvert, Myrtle.....<br>Ohio City.                 | 1090 13th St.          |
| Laird, Roy Hummel.....<br>Pueblo.                  | 2035 Spruce St.        |
| Lash, Clarence Henry.....<br>Loveland.             | University Place       |
| Leadbetter, Sue Emily.....<br>Denver.              | 1061 12th St.          |
| Lovelace, Walter Sharp.....<br>Boulder.            | 1040 10th St.          |
| LyVere, Floyd Eugene.....<br>Lamar.                | 1080 14th St.          |
| Lowrey, Anna.....<br>Boulder.                      | 1080 14th St.          |
| Mahoney, Nano Elizabeth.....<br>Denver.            | 962 Pleasant St.       |
| McCarthy, Daniel Thaddeus.....<br>Boulder.         | 1209 Pennsylvania Ave. |
| McLauthlin, Carl Addison.....<br>Denver.           | 1229 University St.    |
| Mills, Jared Warner, Jr.....<br>Denver.            | 1229 University St.    |
| Mitchell, Louis Albert.....<br>Newark, Ohio.       | 1210 Pleasant St.      |
| Montgomery, Elsie Estella.....<br>Boulder.         | 27th and Walnut Sts.   |
| Montgomery, Victor A.....<br>Boulder.              | 27th and Walnut Sts.   |
| Morris, Anna Belle.....<br>Boulder.                | 960 Regent St.         |
| Mosher, Walter Frederic.....<br>Lansing, Michigan. | 1107 12th St.          |
| Moyes, May Adelaide.....<br>Boulder.               | 421 Pine St.           |
| Nafe, John Paul.....<br>Boulder.                   | 2124 17th St.          |
| Norris, Joseph Patrick.....<br>Manitou.            | 1203 Pennsylvania Ave. |



| NAME AND HOME RESIDENCE.                                    | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------------|------------------------|
| Odlum, Arnold Asbury.....<br>Boulder.                       | 921 Marine St.         |
| Oldland, Carrie.....<br>Meeker.                             | 1221 University St.    |
| Orr, Barbara Matilda.....<br>Boulder.                       | 1121 Pennsylvania Ave. |
| Ostrander, Harry Womersley.....<br>Golden.                  | Men's Dormitory        |
| Peck, Mildred Armstrong.....<br>Denver.                     | 1165 12th St.          |
| Poe, Charles Franklin.....<br>Greeley.                      | 1706 Athens St.        |
| Preston, Calvin Belmont.....<br>Canon City.                 | 1155 13th St.          |
| Preston, Jacob Coulter.....<br>Canon City.                  | 928 University St.     |
| Prisk, Helen Alice.....<br>Nampa, Idaho.                    | 1134 Pleasant St.      |
| Pryor, Hugh Clark.....<br>Boulder.                          | 1145 13th St.          |
| Ragland, Ella Barrett.....<br>Boulder.                      | 1083 13th St.          |
| Remington, Oliver Samuel.....<br>Denver.                    | 421 Concord St.        |
| Rice, DuFay R.....<br>Nixa, Missouri.                       | 973 14th St.           |
| Rucker, Pearl Barnette.....<br>Boulder.                     | 1567 9th St.           |
| Seely, Marie Waterbury.....<br>Boulder.                     | 1117 Pine St.          |
| Slusser, Horace Greeley.....<br>Wheaton, Illinois.          | 1165 13th St.          |
| Sperry, Charles Stillman, Jr.....<br>Newport, Rhode Island. | 1305 University St.    |
| Spyker, Allie Newton.....<br>Baton Rouge, Louisiana.        | 1143 Broadway          |
| Statler, Nellie Margaret.....<br>Greeley.                   | 1165 12th St.          |
| Stearns, Oletha Clarissa.....<br>Boulder.                   | 22nd and Park Sts.     |
| Stiffler, Martin Luther.....<br>Pueblo.                     | 1210 Pleasant St.      |
| Stone, Clifford Hannibal.....<br>Gunnison.                  | 1067 13th St.          |

| NAME AND HOME RESIDENCE.                           | UNIVERSITY RESIDENCE. |
|----------------------------------------------------|-----------------------|
| Storer, Todd Clement.....<br>Pueblo.               | 1005 12th St.         |
| Sweeney, Mabel Emilie.....<br>Denver.              | 1165 12th St.         |
| Taub, Selina.....<br>Denver.                       | 1121 13th St.         |
| Taylor, Ray Robinson.....<br>Pueblo.               | 1229 University St.   |
| Thielen, Gertrude Hendrie.....<br>Leadville.       | 1229 13th St.         |
| Trezise, Elizabeth.....<br>Boulder.                | 1005 Spruce St.       |
| Trowbridge, Mary.....<br>Boulder.                  | 904 Mapleton Ave.     |
| Tyvand, Henry Albert.....<br>Mt. Horeb, Wisconsin. | 1004 Pleasant St.     |
| Ward, Leila Ada.....<br>Boulder.                   | 1113 10th St.         |
| Watson, Edith May.....<br>Boulder.                 | 930 14th St.          |
| Wells, Jessie Lander.....<br>Glass, Tennessee.     | 1216 Pleasant St.     |
| Wilson, Goldie May.....<br>Meeker.                 | 1041 11th St.         |
| Worcester, Dean Amory.....<br>Boulder.             | 1065 11th St.         |

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### JUNIOR CLASS

| NAME AND HOME RESIDENCE.                      | UNIVERSITY RESIDENCE. |
|-----------------------------------------------|-----------------------|
| Allison, Vera Ruth.....<br>McPherson, Kansas. | 1165 12th St.         |
| Ashley, June Maud.....<br>Boulder.            | 1004 Pleasant St.     |
| Argue, Lora.....<br>Boulder.                  | 1832 16th St.         |
| Baker, Alice May.....<br>Meeker.              | 1705 14th St.         |
| Batchelder, Linda.....<br>Sterling.           | 1221 University St.   |
| Bearss, Angie.....<br>Boulder.                | 540 Marine St.        |

| NAME AND HOME RESIDENCE.                         | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------|------------------------|
| Beck, Maud Almyra.....<br>Boulder.               | 665 Maxwell Ave.       |
| Bell, James Washington.....<br>Boulder.          | 1931 Hill St.          |
| Boeck, Albert.....<br>Boise, Idaho.              | 1105 11th St.          |
| Boeke, Elizabeth.....<br>Ouray.                  | 1139 12th St.          |
| Bottum, Margaret.....<br>Aberdeen, South Dakota. | 1165 12th St.          |
| Brown, Ethel Mae.....<br>Boulder.                | 953 11th St.           |
| Campbell, Charles Durham.....<br>Denver.         | 1325 Broadway          |
| Campbell, Gertrude Ivy.....<br>Malvern, Iowa.    | 1143 Broadway          |
| Cannell, Lillian Ethel.....<br>Boulder.          | 1135 11th St.          |
| Carey, Harriet Elizabeth.....<br>Denver.         | 1121 13th St.          |
| Chapman, Myrna Maie.....<br>Carthage, Illinois.  | 1221 University St.    |
| Charles, Neva Irene.....<br>Boulder.             | 1057 13th St.          |
| Clark, Grace Edith.....<br>Denver.               | 1061 12th St.          |
| Clemmons, Maud.....<br>Del Norte.                | 1019 Mapleton Ave.     |
| Clifford, Ray Ernest.....<br>Denver.             | 1210 Pleasant St.      |
| Cline, William Lincoln.....<br>Holton, Kansas.   | 1027 Pennsylvania Ave. |
| Coates, Helen Oatman.....<br>Denver.             | 1134 Pleasant St.      |
| Cochran, Gladys Luella.....<br>Del Norte.        | 1040 11th St.          |
| Cochrane, Harriet Pearl.....<br>Saguache.        | 1327 17th St.          |
| Cooper, Henry Sisson.....<br>Denver.             | 1155 13th St.          |
| Craig, Maud Elizabeth.....<br>Boulder.           | 1135 Lincoln Place     |
| Crook, Arta Belle.....<br>Glenwood Springs.      | 1083 13th St.          |

| NAME AND HOME RESIDENCE.                     | UNIVERSITY RESIDENCE.  |
|----------------------------------------------|------------------------|
| Culver, George Warren.....<br>Fort Collins.  | 1105 11th St.          |
| Curtin, Elma Hope.....<br>Boulder.           | 811 Mapleton Ave.      |
| Curtis, Rupert Carlyle.....<br>Littleton.    | 1135 Broadway          |
| Cuthbertson, Lulu Lee.....<br>Pueblo.        | 1061 12th St.          |
| Davidson, Ray Cormie.....<br>Las Animas.     | 1000 Grand View Ave.   |
| Deu Pree, Nora.....<br>Elizabeth.            | 1027 Pennsylvania Ave. |
| Elder, Mary Esther.....<br>Boulder.          | 1075 12th St.          |
| Evinger, Olive Permelia.....<br>Boulder.     | 921 Maxwell Ave.       |
| Faith, Nellie Head.....<br>Denver.           | 1212 College Ave.      |
| Farrington, Edith Constance.....<br>Boulder. | 1506 12th St.          |
| Funk, Ilo Clare.....<br>Chihuahua, Mexico.   | 1044 Pleasant St.      |
| Gates, Mabel Eleanor.....<br>Monte Vista.    | 1061 12th St.          |
| Goodykoontz, Colin Brummitt.....<br>Boulder. | 1027 10th St.          |
| Gundrum, Richard Warren.....<br>Denver.      | 1045 Pennsylvania Ave. |
| Ham, Wilkie C.....<br>Caddoa.                | Men's Dormitory        |
| Harsh, Hester Belle.....<br>Pueblo.          | 1061 12th St.          |
| Hassinger, Willmette.....<br>Denver.         | 1076 12th St.          |
| Hill, Anne Herbert.....<br>Waco, Texas.      | 1134 Pleasant St.      |
| Hinchman, Fred Kimpton.....<br>Denver.       | 1019 19th St.          |
| Hollowell, Sallie Zilpha.....<br>Denver.     | 1113 10th St.          |
| Hough, Gladys.....<br>Denver.                | 1090 13th St.          |
| Huntoon, Geneva.....<br>Delta.               | 1221 University St.    |

| NAME AND HOME RESIDENCE.                                | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------|-----------------------|
| Ingersoll, Warren Briggs.....<br>Boulder.               | 1408 Pearl St.        |
| Jameson, Kathryn.....<br>Golden.                        | 1134 Pleasant St.     |
| Johnson, Charles Beattie.....<br>Shreveport, Louisiana. | 1155 13th St.         |
| Johnson, Florence May.....<br>Central City.             | 1061 12th St.         |
| Kansgen, Ada Christena.....<br>Montrose.                | 1014 Spruce St.       |
| Kayden, Eugene Mark.....<br>Kherson, Russia.            | Men's Dormitory       |
| Kendall, Claribel.....<br>Boulder.                      | 1325 Broadway         |
| Kneale, Mildred Hazel.....<br>Boulder.                  | 2043 Arapahoe Ave.    |
| Lannon, Fannie Mae.....<br>Pueblo.                      | 1093 10th St.         |
| Lee, Robert Emmet.....<br>Denver.                       | 865 12th St.          |
| Leonard, Eleanor.....<br>Denver.                        | 1229 13th St.         |
| Lillie, Neva May.....<br>Denver.                        | 1165 12th St.         |
| Lowe, Naamah.....<br>Durango.                           | 1243 Grand View Ave.  |
| Lynch, Elwood Best.....<br>Leadville.                   | 1083 14th St.         |
| Mahoney, Margaret.....<br>Denver.                       | 962 Pleasant St.      |
| Martin, Alta.....<br>Boulder.                           | 2330 13th St.         |
| Martin, Esther Storey.....<br>Victor.                   | 1162 12th St.         |
| McKenzie, Pauline Griswold.....<br>Boulder.             | 809 Pine St.          |
| Merrill, Georgia Ruth.....<br>Boulder.                  | 821 Mapleton Ave.     |
| Morrish, Ross William.....<br>Fort Collins.             | University Place      |
| Morrison, Marguerite Louise.....<br>Grand Junction.     | R. R. No. 2           |
| Morrison, William Louis.....<br>Boulder.                | 1603 Walnut St.       |

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------|------------------------|
| Morse, Mary.....<br>Denver.                         | 1229 13th St.          |
| Mosher, Jack Marsh.....<br>Greeley.                 | 1229 University St.    |
| Nelson, Kate.....<br>Boulder.                       | 1068 12th St.          |
| Nighswander, Goldie Una.....<br>Boulder.            | 1606 Floral Park       |
| Noxon, Ella Rose.....<br>Idaho Springs.             | 2303 Arapahoe St.      |
| Ohlbach, Anna Louise.....<br>Denver.                | 1044 University St.    |
| O'Rourke, Mary Jane.....<br>Boulder.                | 828 Marine St.         |
| Parish, Lottie Belle.....<br>Johnstown.             | 1221 University St.    |
| Patten, Elizabeth.....<br>Yuma.                     | 1100 Pennsylvania Ave. |
| Pierce, Edna.....<br>Denver.                        | 1229 13th St.          |
| Pulliam, Lula Rice.....<br>Loveland.                | 17th and Pine Sts.     |
| Reynolds, Edna Marguerite.....<br>Denver.           | 1325 Broadway          |
| Rich, Elizabeth Ann.....<br>Norwood Park, Illinois. | 1216 Pleasant St.      |
| Ryals, Mary Helen.....<br>Denver.                   | 1165 12th St.          |
| Salter, Bernice Alma.....<br>Pueblo.                | 1061 12th St.          |
| Schoenwald, Elizabeth.....<br>Cripple Creek.        | 1110 10th St.          |
| Schumacher, Herman Joseph.....<br>Denver.           | 1089 13th St.          |
| Seeman, Bernard Johnson.....<br>Denver.             | 1005 12th St.          |
| Shumate, Ruth Churchill.....<br>Aspen.              | 1221 University St.    |
| Slocum, Cecile Hortense.....<br>Boulder.            | 1165 13th St.          |
| Smith, Iva Pearl.....<br>Boulder.                   | 1065 11th St.          |
| Spaulding, Iva Maude.....<br>Boulder.               | 1125 Pleasant St.      |



| NAME AND HOME RESIDENCE.                        | UNIVERSITY RESIDENCE. |
|-------------------------------------------------|-----------------------|
| Sundeen, Ruby Marie.....<br>Moline, Illinois.   | 1134 Pleasant St.     |
| Swain, Elva Charles.....<br>Quincy, Illinois.   | 1044 University St.   |
| Thornton, Hattie May.....<br>Chicago, Illinois. | 1221 University St.   |
| Toby, Emma Caroline.....<br>Denver.             | 1126 Grand View Ave.  |
| Trovillion, Beatrice.....<br>Boulder.           | 941 Pearl St.         |
| Turner, Edna Louise.....<br>Boulder.            | 2213 Pine St.         |
| Turney, Vera Faye.....<br>Loveland.             | 1040 11th St.         |
| Vaille, Rebecca Whitehill.....<br>Denver.       | 1229 13th St.         |
| Waldo, Agnes Murray.....<br>Denver.             | 1036 14th St.         |
| Waldo, Margaret Ellen.....<br>Denver.           | 1036 14th St.         |
| Wales, Willa.....<br>Loveland.                  | 970 11th St.          |
| Walker, Don Watts.....<br>Boulder.              | 1129 11th St.         |
| Ward, Marian Menett.....<br>Alma.               | 1703 15th St.         |
| Warner, Esther Mae.....<br>Fort Morgan.         | 1035 Grand View Ave.  |
| Webb, Besse.....<br>Boulder.                    | 1607 6th St.          |
| Welliver, George Warman.....<br>Oxford, Ohio.   | 1830 16th St.         |
| Wright, Earl Edwin.....<br>Denver.              | 1205 13th St.         |

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### SOPHOMORE CLASS

| NAME AND HOME RESIDENCE.             | UNIVERSITY RESIDENCE. |
|--------------------------------------|-----------------------|
| Allen, May.....<br>Pueblo.           | 1061 12th St.         |
| Arnett, Clyde Drumm.....<br>Boulder. | 1153 Pleasant St.     |

| NAME AND HOME RESIDENCE.                     | UNIVERSITY RESIDENCE.  |
|----------------------------------------------|------------------------|
| Ashley, Glaister Herod.....<br>Boulder.      | 1004 Pleasant St.      |
| Ashley, Thomas Cooley.....<br>Saguache.      | 1209 Pennsylvania Ave. |
| Atkinson, Ernest Thomas.....<br>Greeley.     | 1105 11th St.          |
| Aurand, Mary McClure.....<br>Denver.         | 1061 12th St.          |
| Baker, Florence Lillian.....<br>Meeker.      | 1703 14th St.          |
| Baker, Hilton Vaughn.....<br>Boulder.        | University Campus      |
| Ball, Una Laura.....<br>Idaho Springs.       | 1123 Spruce St.        |
| Barker, Kathleen Mary.....<br>Denver.        | 1151 10th St.          |
| Bedortha, Luther Eddy.....<br>Oberlin, Ohio. | 1210 Pleasant St.      |
| Beresford Elizabeth Frances.....<br>Boulder. | 1064 13th St.          |
| Boeke, Lenore.....<br>Ouray.                 | 1139 12th St.          |
| Boeke, Richardt Miles.....<br>Ouray.         | 1210 Pleasant St.      |
| Brewster, Edith Irma.....<br>Salida.         | 1040 11th St.          |
| Briggs, Alice.....<br>Hollywood, California. | 1229 13th St.          |
| Brown, Nellie.....<br>Eaton.                 | 1143 Broadway          |
| Brownlee, Teresa Beatrice.....<br>Ouray.     | 1040 11th St.          |
| Bunce, Hazel Udine.....<br>Fruita.           | 1143 Broadway          |
| Burk, Urmal Wilma.....<br>Boulder.           | 1035 Grand View Ave.   |
| Burkhard, Walter.....<br>Trinidad.           | 1205 13th St.          |
| Burnham, Horace Leslie.....<br>Boulder.      | 1324 High St.          |
| Butters, Gladys Almeda.....<br>Denver.       | 1045 14th St.          |
| Campbell, Flora C.....<br>Denver.            | 970 11th St.           |

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------|-----------------------|
| Carlson, Minnie Olivia.....<br>Longmont.            | 1165 Broadway         |
| Carman, Orval Edward.....<br>Las Animas.            | 1005 14th St.         |
| Carney, Helen Margaret.....<br>Boulder.             | 1019 14th St.         |
| Chase, Mabel Leonard.....<br>Boulder.               | 1018 Pine St.         |
| Chipman, Ina Myrtle.....<br>Sterling.               | 970 11th St.          |
| Chittenden, Dorothy.....<br>Denver.                 | 1229 13th St.         |
| Clark, Hazel Blanche.....<br>Kansas City, Missouri. | 1053 12th St.         |
| Coffman, Olive Elizabeth.....<br>Malvern, Iowa.     | 1143 Broadway         |
| Cowell, Hazel.....<br>Grand Junction.               | 994 14th St.          |
| Curtis, Gladys Constance.....<br>Castle Rock.       | 1024 University St.   |
| Dague, Roswell.....<br>Boulder.                     | 603 Spruce St.        |
| Dargavel, Gertrude Louise.....<br>Salida.           | 1127 Broadway         |
| Davis, Jessie A.....<br>Fort Collins.               | 1045 14th St.         |
| Dean, Bessie Jane.....<br>Grand Junction.           | 994 14th St.          |
| Dean, Marguerite.....<br>Boulder.                   | 945 University St.    |
| Dean, Willa Agatha.....<br>Grand Junction.          | 994 14th St.          |
| Deatherage, Charlaine.....<br>Kimberly, Idaho.      | 1638 9th St.          |
| Donifelser, Edna Zelma.....<br>Boulder.             | 707 Maxwell Ave.      |
| Doughty, Charles Linton.....<br>Lamar.              | 1037 12th St.         |
| Drinkwater, Harold Paul.....<br>Denver.             | 1229 University St.   |
| Eddy, Elise Osgood.....<br>Denver.                  | 1061 12th St.         |
| Engelbach, A. Arthur.....<br>Denver.                | 1165 13th St.         |

| NAME AND HOME RESIDENCE.                       | UNIVERSITY RESIDENCE. |
|------------------------------------------------|-----------------------|
| Fair, Evan Albert.....<br>Chrisman, Illinois.  | 1019 14th St.         |
| Farrington, Florence Mildred.....<br>Boulder.  | 1506 12th St.         |
| Fernald, Hester.....<br>Boulder.               | 1146 10th St.         |
| Fleming, Minnie Elizabeth.....<br>Read.        | 1061 12th St.         |
| Franklin, Electa.....<br>Victor.               | 1229 13th St.         |
| Fraser, Margaret Marie.....<br>Boulder.        | 534 Mapleton Ave.     |
| Frey, Howard Lincoln K.....<br>Buena Vista.    | R. F. D. No. 3        |
| Ganson, Rose Elizabeth.....<br>Idaho Springs.  | 1934 Pine St.         |
| Garvey, Thecla.....<br>Denver.                 | 1143 Broadway         |
| Gill, Katharine.....<br>Littleton.             | 1221 University St.   |
| Greenman, Olga.....<br>Pueblo.                 | 1093 10th St.         |
| Gregory, Tessie Edith.....<br>Pueblo.          | 1076 12th St.         |
| Groom, Robert John.....<br>Boulder.            | North 26th St.        |
| Guthrie, Paul Roy.....<br>Boulder.             | 1053 12th St.         |
| Gwinn, Edith.....<br>Urbana, Illinois.         | 1165 12th St.         |
| Hadsell, Zeda Myrtle.....<br>Wildorado, Texas. | 1139 12th St.         |
| Hankins, Margaret M.....<br>Boulder.           | 1606 Pine St.         |
| Hart, Helen Louise.....<br>Boulder.            | 720 Mapleton Ave.     |
| Heaton, Ross Leslie.....<br>Boulder.           | 1305 17th St.         |
| Hills, Roy Owensby.....<br>Boulder.            | 956 University St.    |
| Hinkley, Lelia Mae.....<br>Sterling.           | 970 11th St.          |
| Holman, Lillian.....<br>Colorado Springs.      | 1134 Pleasant St.     |

| NAME AND HOME RESIDENCE.                        | UNIVERSITY RESIDENCE. |
|-------------------------------------------------|-----------------------|
| Hubbard, Mae E.....<br>Boulder.                 | 1216 20th St.         |
| Huffaker, Vivien Faye.....<br>Denver.           | 1134 Pleasant St.     |
| Hunt, Nell.....<br>Chillicothe, Missouri.       | 1061 12th St.         |
| Hutchinson, Anna.....<br>Walsenburg.            | 642 Mapleton Ave.     |
| Irving, Elizabeth Jane A.....<br>Cripple Creek. | 952 Marine St.        |
| Irwin, W. Archie.....<br>Denver.                | 1441 12th St.         |
| Johnson, Anna Elvira.....<br>Berthoud.          | 1216 Pleasant St.     |
| Johnson, Rudolph R. B.....<br>Niwot.            | City Y. M. C. A.      |
| Jones, Orson Pennoyer.....<br>Aurora.           | University Place      |
| Kaiser, Harold Robert.....<br>Breckenridge.     | 1140 Grand View Ave.  |
| Kearns, John William.....<br>Walsenburg.        | 921 South 18th St.    |
| Kitchen, Ford.....<br>Spencer, Ohio.            | 1081 11th St.         |
| Kendall, Florence.....<br>Boulder.              | 1325 Broadway         |
| Kiker, Grace.....<br>Boulder.                   | 1435 Spruce St.       |
| Kingsland, Edwin Russell.....<br>Denver.        | 1145 Pleasant St.     |
| Kinnison, Inez.....<br>Fort Collins.            | 1045 14th St.         |
| Kyle, Estelle Marie.....<br>Denver.             | 1221 University St.   |
| Lacy, Louise.....<br>Rifle.                     | 1040 11th St.         |
| Leach, Winthrop Worcester.....<br>Denver.       | 1058 13th St.         |
| Lee, Helen May.....<br>Pueblo.                  | 1076 12th St.         |
| Leslie, Katherine Bower.....<br>Pueblo.         | 1229 13th St.         |
| LeVeque, Norma Ebole.....<br>Boulder.           | 1145 13th St.         |

| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.                         |
|----------------------------------|-----------------------------------------------|
| Lewis, Glenn Francis.....        | 1441 12th St.<br>Denver.                      |
| Lewis, James David.....          | University Place<br>Sunshine.                 |
| Lewis, Shirley Charlotte.....    | 1044 10th St.<br>University Park.             |
| Lightbourn, Willis Baker.....    | Y. M. C.A.<br>Central City.                   |
| Long, Dora Jane.....             | 1090 13th St.<br>Preston, Minnesota.          |
| Lowe, Irwin Merrill.....         | 1405 12th St.<br>Glenwood Springs.            |
| Malcouronne, DeWitt Clinton..... | 1031 13th St.<br>Fort Collins.                |
| Martin, Joseph Anthony.....      | 1140 10th St.<br>Trinidad.                    |
| Marvin, Cornelius J.....         | 1212 College Ave.<br>Denver.                  |
| Mayne, Earl Leslie.....          | 1005 12th St.<br>Denver.                      |
| McCausland, Calla Amelia.....    | 1057 13th St.<br>Denver.                      |
| McDonnell, Joe Hunter.....       | 1165 13th St.<br>• Little Rock, Arkansas.     |
| McWilliams, Roy M.....           | 1045 Pennsylvania Ave.<br>Pueblo.             |
| Miller, Earle Brennehan.....     | 1820 South Broadway<br>Boulder.               |
| Miller, Eva Grace.....           | 1817 Athens St.<br>Boulder.                   |
| Mock, Cecil.....                 | 1713 15th St.<br>Boulder.                     |
| Mock, Clinton John.....          | 1713 15th St.<br>Boulder.                     |
| Morgan, May Gladys.....          | 970 11th St.<br>Canon City.                   |
| Morris, Earl Halstead.....       | 1135 Broadway<br>Farmington, New Mexico.      |
| Murphy, Joseph Ambrose.....      | 13th St. and Grand View Ave.<br>Nampa, Idaho. |
| Naugle, Benjamin Eben.....       | 1229 University St.<br>Sterling.              |
| Odlum, Floyd Bostwick.....       | 921 Marine St.<br>Boulder.                    |



| NAME AND HOME RESIDENCE.                         | UNIVERSITY RESIDENCE. |
|--------------------------------------------------|-----------------------|
| Olson, Esther Mathilda.....<br>Pueblo.           | 970 11th St.          |
| Owen, Jeannette Lucile.....<br>Pueblo.           | 1229 13th St.         |
| Parlapiano, Sam.....<br>Pueblo.                  | 1135 Broadway         |
| Patten, Alva Philip.....<br>Julesburg.           | City Y. M. C. A.      |
| Paxton, Wilma Blanche.....<br>Canon City.        | 1044 12th St.         |
| Pettibone, Jennie Adelaide.....<br>Boulder.      | 648 University St.    |
| Pierce George Alexander.....<br>Denver.          | 1058 13th St.         |
| Place, Edwin Bray.....<br>Boulder.               | 935 10th St.          |
| Posse, Harriet Adaline.....<br>Del Norte.        | 1910 Grove St.        |
| Potter, Mae E.....<br>Denver.                    | 1221 University St.   |
| Powless, Anna Holliday.....<br>Alma.             | 1405 Arapahoe St.     |
| Prosser, Georgianna.....<br>Cheyenne, Wyoming.   | 1079 12th St.         |
| Pulliam, Obie Sue.....<br>Loveland.              | 17th and Pine Sts.    |
| Purdy, Sheldon Paul.....<br>Denver.              | 973 14th St.          |
| Rachofsky, David Ezekiel.....<br>Durango.        | 1037 Lincoln Place    |
| Rathvon, Nathaniel Peter.....<br>Boulder.        | 1333 Pine St.         |
| Richie, James King.....<br>Georgetown, Illinois. | 1146 Pleasant St.     |
| Richie, Wilson Leaverton.....<br>Boulder.        | 1119 Broadway         |
| Robbins, Harry William.....<br>Greeley.          | 1005 14th St.         |
| Rohwer, George Newton.....<br>Boulder.           | 624 Pine St.          |
| Rowen, Ralph Mahan.....<br>Longmont.             | 1105 11th St.         |
| Savage, Joseph Carr.....<br>Denver.              | 1205 13th St.         |

| NAME AND HOME RESIDENCE.                    | UNIVERSITY RESIDENCE.  |
|---------------------------------------------|------------------------|
| Sayre, Leland Stanford.....<br>Boulder.     | 980 11th St.           |
| Schmoll, Hazel Marguerite.....<br>Ward.     | 1139 12th St.          |
| Scott, Francis H.....<br>Del Norte.         | 1140 Grand View Ave.   |
| Scott, Helen Darling.....<br>Manitou.       | 1061 12th St.          |
| Shaw, George Hamlin.....<br>Houlton, Maine. | 1205 13th St.          |
| Shute, Ruby Ray.....<br>Boulder.            | 1325 Broadway          |
| Smith, Charlotte Merle.....<br>Boulder.     | 1065 11th St.          |
| Smith, Margaret Robina.....<br>Montclair.   | 1083 13th St.          |
| Smith, Mary Ivetta.....<br>Longmont.        | 1139 12th St.          |
| Smith, Robert James.....<br>Greeley.        | 1107 12th St.          |
| Smith, Thelma.....<br>Fowler.               | 930 14th St.           |
| Stanley, Fae.....<br>Lafayette.             | 930 14th St.           |
| Streamer, Lula May.:.....<br>Boulder.       | 2520 Pearl St.         |
| Sutley, Melvin Lockett.....<br>Center.      | 1140 Grand View Ave.   |
| Swanson, Victoria.....<br>Georgetown.       | 930 14th St.           |
| Swartz, Margaret Jane.....<br>Boulder.      | 1147 Lincoln Place     |
| Tarbell, Robert Raymond.....<br>Saguache.   | 1209 Pennsylvania Ave. |
| Varney, Fred William.....<br>Denver.        | 1205 13th St.          |
| Wallace, Willard Wright.....<br>Fairplay.   | 1058 13th St.          |
| Walker, Eleanor May.....<br>Denver.         | 1044 University St.    |
| Weaver, Carl Franklin.....<br>Boulder.      | 1315 Spruce St.        |
| Wheeler, Kathleen Fisher.....<br>Greeley.   | 1165 12th St.          |

## NAME AND HOME RESIDENCE.

## UNIVERSITY RESIDENCE.

|                              |                                        |
|------------------------------|----------------------------------------|
| Williams, Frances Edna.....  | 944 Regent St.<br>Elbert.              |
| Williams, May Elizabeth..... | 1141 11th St.<br>Leadville.            |
| Wright, Zella Muriel.....    | 1138 13th St.<br>Boulder.              |
| Young, Margaret.....         | 1216 Pleasant St.<br>Colorado Springs. |

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## FRESHMAN CLASS

## NAME AND HOME RESIDENCE.

## UNIVERSITY RESIDENCE.

|                                  |                                               |
|----------------------------------|-----------------------------------------------|
| Adams, Ethel Low.....            | 1233 Broadway<br>Grand Junction.              |
| Albers, Henry Frederick.....     | Men's Dormitory<br>Denver.                    |
| Albertson, Dora Emily.....       | 972 14th St.<br>Boulder.                      |
| Alexander, Robert Walker.....    | 1912 17th St.<br>Gleason, Tennessee.          |
| Allen, Frank DeWitt.....         | 1203 Pennsylvania Ave.<br>Fort Morgan.        |
| Ames, Fannie Orlina.....         | 1044 University St.<br>Glenwood, Iowa.        |
| Anderson, Harry Frederick.....   | 1037 12th St.<br>Denver.                      |
| Anderson, Mary Katherine.....    | 1325 Broadway<br>Denver.                      |
| Andrew, Marion.....              | 2119 Hill St.<br>Henderson.                   |
| Antrim, Jessie Virginia.....     | 625 Maxwell Ave.<br>Randolph, Iowa.           |
| Arasmith, Edith Merle.....       | 1126 Grand View Ave.<br>Golden.               |
| Archibald, Henrietta Stuart..... | 1012 University St.<br>Denver.                |
| Bacon, B. Bentley.....           | 1140 Grand View Ave.<br>Wichita Falls, Texas. |
| Bacon, Reginald Reuben.....      | 1703 14th St.<br>Ouray.                       |
| Bailey, Raymond Howard.....      | 1229 University St.<br>Denver.                |

| NAME AND HOME RESIDENCE.                           | UNIVERSITY RESIDENCE.    |
|----------------------------------------------------|--------------------------|
| Bailey, Warner Dunn.....<br>Denver.                | 1229 University St.      |
| Baily, Frederick W.....<br>Sac City, Iowa.         | 1121 University St.      |
| Ball, Mary Ethel.....<br>Louisville.               | University Place         |
| Barclay, Emilie.....<br>Longmont.                  | 1061 12th St.            |
| Bartlett, Mary.....<br>Boulder.                    | 1425 Pine St.            |
| Belding, Ralph.....<br>Eagle.                      | 12th St. and Euclid Ave. |
| Berbower, Melvin Robert.....<br>Cripple Creek.     | 1044 Pleasant St.        |
| Berg, Emma Charlotte.....<br>Fruita.               | 929 Regent St.           |
| Biethan, Frederic Howard.....<br>Blackfoot, Idaho. | 1028 Pleasant St.        |
| Bimson, Walter Reed.....<br>Berthoud.              | 1335 Grand View Ave.     |
| Bird, Harold.....<br>Denver.                       | 1054 8th St.             |
| Blakey, Susie.....<br>Boulder.                     | 1067 13th St.            |
| Bleasdale, John Walter.....<br>Brush               | 966 10th St.             |
| Bonner, Beryl Mary.....<br>Leadville.              | 1127 Broadway            |
| Bouslog, John Samuel.....<br>Cordell, Oklahoma.    | 801 University St.       |
| Brewster, Chauncey Bunce.....<br>Boulder.          | 1601 Hillside Road       |
| Bronson, Don.....<br>Hamilton, Ohio.               | 1205 13th St.            |
| Brosius, John Herbert.....<br>Rifle.               | 1091 14th St.            |
| Brown, Helen Esther.....<br>Boulder.               | 1045 12th St.            |
| Brubaker, Catherine June.....<br>Denver.           | 1127 Broadway            |
| Bryant, William Ross.....<br>Terry, South Dakota.  | 1125 10th St.            |
| Burke, Maude Estella.....<br>Boulder.              | 1002 Spruce St.          |

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------|-----------------------|
| Burke, Ruth Genevieve.....<br>Boulder.              | 1002 Spruce St.       |
| Burr, Ira Allen.....<br>Canon City.                 | 1145 13th St.         |
| Burton, Dorothy Margaret.....<br>Pueblo.            | 1044 10th St.         |
| Butler, Mary.....<br>Denver.                        | 1045 12th St.         |
| Campbell, Claude Melnotte.....<br>Boulder.          | 522 Pine St.          |
| Campbell, William Ralph.....<br>Boulder.            | 493 Marine St.        |
| Carlson, Milton.....<br>Masters.                    | 1216 College Ave.     |
| Carney, Clinton Corl.....<br>Denver.                | 1205 13th St.         |
| Casseil, Henry Brown.....<br>Denver.                | 1205 13th St.         |
| Chamberlin, Irma Mary.....<br>Denver.               | 900 Lincoln Place     |
| Champion, Claire Lazenby.....<br>Arvada.            | 1127 Broadway         |
| Champion, Robert De Lisle.....<br>Canon City.       | 1058 13th St.         |
| Chastain, Garvin Dunn.....<br>Chickasha, Oklahoma.  | 1229 University St.   |
| Chew, Mary Brand.....<br>Pueblo.                    | 1153 Pleasant St.     |
| Christian, Ben.....<br>Denver.                      | 1107 13th St.         |
| Clark, Bessie.....<br>Bald Mountain.                | 1090 13th St.         |
| Clatworthy, Leah Alice.....<br>Fort Morgan.         | 1045 12th St.         |
| Cleveland, Mattie Hope .....                        | 655 12th St.          |
| Cohenour, Leo Bertram.....<br>Denver.               | University Place      |
| Collier, Cecile Mae.....<br>Boulder.                | 1015 Pine St.         |
| Comstock, Marion Bayley.....<br>Muskegon, Michigan. | 1216 Pleasant St.     |
| Conkling, Clark.....<br>Lyons, Kansas.              | 940 14th St.          |

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE. |
|-------------------------------------------------------|-----------------------|
| Conkling, Enid.....<br>Lyons, Kansas.                 | 940 14th St.          |
| Conlin, Rose Catharine.....<br>Aspen.                 | 1029 University St.   |
| Cook, Edward Sewell.....<br>Henderson.                | 1067 13th St.         |
| Coppinger, Edward Braidon.....<br>Durango.            | 1242 12th St.         |
| Copps, Edwin Wesley.....<br>Boulder.                  | 1540 Pine St.         |
| Cosgrove, Maud Alice.....<br>Silver City, New Mexico. | 1085 13th St.         |
| Cowell, Edward Wier.....<br>Denver.                   | 1210 Pleasant St.     |
| Cowles, James Howard.....<br>Denver.                  | 1830 16th St.         |
| Coyle, Dena May.....<br>Pueblo.                       | 1221 University St.   |
| Currier, George Bruce.....<br>Grand Junction.         | 1719 Water St.        |
| Currier, Lucius Carpenter.....<br>Heiberger.          | 940 14th St.          |
| Daley, Samuel Jesse.....<br>Cimarron, New Mexico.     | 1816 Grove St.        |
| Daniels, Mentor Byron.....<br>Pueblo.                 | 1210 Pleasant St.     |
| DesBrisay, Mary.....<br>Boulder.                      | 2053 Hill St.         |
| Dickson, Arthur Jerome.....<br>Dayton, Wyoming.       | 1080 14th St.         |
| Dininger, Edith.....<br>Greenville, Ohio.             | 1040 11th St.         |
| Dixon, Marjorie Adele.....<br>Denver.                 | 1002 Mapleton Ave.    |
| Dorland, Luke Earl.....<br>Pueblo.                    | 1221 Pearl St.        |
| Drake, Helen Frances.....<br>Pueblo.                  | 1229 13th St.         |
| Druva, Mary Lenore.....<br>Pueblo.                    | 1844 Athens St.       |
| Eaton, Beth Edna.....<br>Boulder.                     | 1746 Pine St.         |
| Eaton, Myrtle.....<br>Boulder.                        | 1746 Pine St.         |



| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE. |
|------------------------------------------------------|-----------------------|
| Eby, Evelyn Mabel.....<br>Boulder.                   | 1204 Pleasant St.     |
| Echternach, Albert Verne.....<br>Palisade.           | 1005 12th St.         |
| Emigh, Hazel Blanch.....<br>Boulder.                 | 1036 Grand View Ave.  |
| Engelbach, Florence B.....<br>Denver.                | 1033 14th St.         |
| Engels, Bernice R.....<br>Rocky Ford.                | 950 Marine St.        |
| Engle, Kenyon Lyle.....<br>State Centre, Iowa.       | 1155 13th St.         |
| Epperson, Mary Winifred.....<br>Aspen.               | 1107 10th St.         |
| Erickson, Maud Elvira.....<br>Boulder.               | 1090 13th St.         |
| Eskridge, Asher Michael.....<br>Penrose.             | 970 11th St.          |
| Fairbairn, Boyce.....<br>Little Rock, Arkansas.      | 1012 14th St.         |
| Faus, Ernestine Katheryn.....<br>Boulder.            | 1443 Spruce St.       |
| Fenner, Helen Elizabeth.....<br>Denver.              | 1040 Mapleton Ave.    |
| Ferguson, Ruth Sara.....<br>Boulder.                 | 2337 9th St.          |
| Fiske, Eugene William.....<br>Santa Fe, New Mexico.  | Men's Dormitory       |
| Fitch, Paul Raymond.....<br>Sterling.                | 1077 14th St.         |
| Flynn, Florence.....<br>Aspen.                       | 1109 13th St.         |
| Flynn, Vera Jeanette.....<br>Pueblo.                 | 1064 13th St.         |
| Fonda, Catharine Farrell.....<br>Boulder.            | 2135 8th St.          |
| Foss, Evelyn Mary.....<br>Salida.                    | 1040 11th St.         |
| Fowler, Eugene Parrott.....<br>Denver.               | 1229 University St.   |
| Fowler, Gretchen Rhodehaus.....<br>Colorado Springs. | 1134 Pleasant St.     |
| Freeman, Nina Mary.....<br>Villisca, Iowa.           | Woman's Cottage       |

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------|-----------------------|
| Frost, Mary Cooper.....<br>Denver.                  | 1083 13th St.         |
| Fruit, Edna Elaine.....<br>Boulder.                 | 1625 17th St.         |
| Fye, Verna Belle.....<br>Boulder.                   | 19th St. and 9th Ave. |
| Gates, Correy.....<br>Denver.                       | 1145 13th St.         |
| Gilcrest, Dorothy.....<br>Denver.                   | 1076 12th St.         |
| Gilligan, Nellie.....<br>Boulder.                   | 937 S. Broadway       |
| Gjellum, Arthur Blaine.....<br>Fowler.              | 1315 11th St.         |
| Goss, Hazel Stevenson.....<br>Denver.               | 1143 Broadway         |
| Greedy, Paul Victor.....<br>Denver.                 | 1155 13th St.         |
| Greene, Alice Marian.....<br>Arvada.                | 1103 Pine St.         |
| Groesbeck, Hazel Addie.....<br>Garner, Iowa.        | 556 University St.    |
| Habermann, Clara.....<br>Rico.                      | 716 Marine St.        |
| Haddock, Benjamin Henry.....<br>Boulder.            | R. F. D., Box 6       |
| Haeberle, Fred Edward.....<br>Denver.               | Men's Dormitory       |
| Haines, Lila .....<br>Pueblo.                       | 1229 13th St.         |
| Hall, Walter Ralph.....<br>Boulder.                 | 1031 13th St.         |
| Ham, Floid.....<br>Caddoa.                          | Men's Dormitory       |
| Hamilton, Ruth Eliza.....<br>Pueblo.                | 1086 13th St.         |
| Hammond, Mary Hannah.....<br>Cripple Creek.         | 1090 13th St.         |
| Hardin, Virginia.....<br>Denver.                    | 1076 12th St.         |
| Harley, George Townsend.....<br>New York, New York. | 1441 12th St.         |
| Harrington, Elizabeth.....<br>Denver.               | 1243 Grand View Ave.  |

| NAME AND HOME RESIDENCE.                          | UNIVERSITY RESIDENCE.  |
|---------------------------------------------------|------------------------|
| Harris, Georgia B.....<br>Bedford, Iowa.          | 1033 14th St.          |
| Harris, Robert Fitton.....<br>Denver.             | 1135 Broadway          |
| Heilman, Rosa Catharine.....<br>Monte Vista.      | 1100 Pennsylvania Ave. |
| Hendershot, Marguerite Mary.....<br>Walsenburg.   | 1233 Broadway          |
| Henningsen, Bertha Clara.....<br>Pueblo.          | 1064 13th St.          |
| Hersey, Clarence Batchelder.....<br>Denver.       | 1005 14th St.          |
| Hildebrand, Lucille Gertrude.....<br>Denver.      | 1143 Broadway          |
| Hinds, Norman Ethan Allen.....<br>Denver.         | 1209 Pennsylvania St.  |
| Hoover, Minnie Jenivie.....<br>Bedford, Iowa.     | 1033 14th St.          |
| Hopkins, Edith Kempton.....<br>Boulder.           | 1091 14th St.          |
| Horn, Stillman Quinby.....<br>Littleton.          | 1138 Grand View Ave.   |
| House, Floyd Nelson.....<br>Boulder.              | 2002 Spruce St.        |
| Howe, William Warren.....<br>Pueblo.              | 927 Pine St.           |
| Howland, Meroe G.....<br>Boulder.                 | 1119 Broadway          |
| Hulburt, Fannie Eliza.....<br>Palisade.           | 1376 Athens St.        |
| Hyde, Anna Beth.....<br>Denver.                   | 1325 Broadway          |
| Isley, Other Eugene.....<br>Wichita Falls, Texas. | 952 Maxwell Ave.       |
| Jackson, Alma Stroup.....<br>Boulder.             | Colorado Sanitarium    |
| Jackson, John Donald.....<br>Denver.              | 1216 College Ave.      |
| Johnson, Frances.....<br>Denver.                  | 1143 Broadway          |
| Johnson, Lillie.....<br>Longmont.                 | 1165 Broadway          |
| Jones, Helen.....<br>Victor.                      | 1090 13th St.          |

| NAME AND HOME RESIDENCE.                                 | UNIVERSITY RESIDENCE. |
|----------------------------------------------------------|-----------------------|
| Kabell, Minnie Merle.....<br>Vernal, Utah.               | 1204 Pleasant St.     |
| Kaiser, Carl Albert.....<br>Breckenridge.                | 1140 Grand View Ave.  |
| Kaye, Vera Lucile.....<br>Boulder.                       | 2430 12th St.         |
| Keep, Florence Beatrice.....<br>Denver.                  | 1083 13th St.         |
| Kelley, Forrest Linville.....<br>Independence, Missouri. | 1005 12th St.         |
| Kennicott, Lillian May.....<br>Boulder.                  | R. R. 3, Box 85       |
| Kluss, Mabel Marie.....<br>Boulder.                      | 704 Concord Ave.      |
| Kluss, Walter Levi.....<br>Boulder.                      | 704 Concord Ave.      |
| Knowles, Charles Nelson.....<br>Denver.                  | 1325 Broadway         |
| Knowles, Edward Gillette.....<br>Denver.                 | 1325 Broadway         |
| Lamb, Gertrude Viola.....<br>Victor.                     | 935 Lincoln Place     |
| Larrabee, Anna Leola.....<br>Boulder.                    | Boulderado Hotel      |
| Lavington, Leon Edward.....<br>Flagler.                  | 1210 Pleasant St.     |
| Leatherman, Lee Leasure.....<br>Lamar.                   | 1037 12th St.         |
| Leavens, Kenyon.....<br>Denver.                          | 1441 12th St.         |
| Leech, Edward Towner.....<br>Denver.                     | 1037 12th St.         |
| Leighton, Rose Vida.....<br>Denver.                      | University Place      |
| Lippard, Everett Jarrell.....<br>Salida.                 | 1103 South 20th St.   |
| Loughran, Ruby Shelton.....<br>Denver.                   | 1041 Grand View Ave.  |
| Lounsbury, Edith.....<br>Boulder.                        | 940 10th St.          |
| Loupe, Walter Raymond.....<br>Pueblo.                    | 1041 13th St.         |
| MacLean, Isabel Allen.....<br>Denver.                    | 1083 13th St.         |

| NAME AND HOME RESIDENCE.                                  | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------------|-----------------------|
| Macomber, Harold George.....<br>Denver.                   | 1005 14th St.         |
| Mahannah, Edward Earl.....<br>Whitewater.                 | 1054 Grant Place      |
| Martin, Helen Gertrude.....<br>Leadville.                 | 1090 13th St.         |
| Mathews, Thomas Baird.....<br>Walsenburg.                 | 1045 University St.   |
| May, Jessie Elizabeth.....<br>Boulder.                    | 963 10th St.          |
| McClain, Laura Elizabeth.....<br>Sterling.                | 1125 Pleasant St.     |
| McClure, Proctor Myers.....<br>Sedalia.                   | 902 Marine St.        |
| McGinnies, Jessie Evelyn.....<br>Boulder.                 | 875 9th St.           |
| McGrath, Florence Kathleen.....<br>Boulder.               | 963 10th St.          |
| McKenney, Dwight.....<br>La Salle.                        | 1935 Grove St.        |
| McLean, Mabel Inez.....<br>Idaho Springs.                 | 1934 Pine St.         |
| McMullin, Bentley Matthews.....<br>Grand Junction.        | 1129 11th St.         |
| McNeil, Gracie May.....<br>Boulder.                       | 1844 Hill St.         |
| McRorey, Laura Willella.....<br>Trinidad.                 | 1143 Broadway         |
| McSween, Herbert Christian.....<br>Brush.                 | 966 10th St.          |
| Metcalfe, Clifton Arthur.....<br>Boulder.                 | 2043 Pine St.         |
| Milburn, Verdie Mae.....<br>Berthoud.                     | 1089 13th St.         |
| Mill, Dorothy.....<br>Boulder.                            | 401 Pine St.          |
| Miller, Clifton McPherson.....<br>Santa Cruz, California. | University Place      |
| Mills, Corwina Rouse.....<br>Denver.                      | 1083 13th St.         |
| Mints, Lloyd Wynn.....<br>Boulder.                        | 2420 Bluff St.        |
| Monahan, Julia Aileen.....<br>Greeley.                    | 1076 12th St.         |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE. |
|--------------------------------------------------------|-----------------------|
| Morgan, Nathan Wilson.....<br>Denver.                  | 1133 Pleasant St.     |
| Morgan, Ray Tennyson.....<br>Boulder.                  | 1816 Grove St.        |
| Morison, James Hartshorn.....<br>Sterling.             | 1038 University St.   |
| Morris, Clara Lavinia.....<br>Gunnison.                | 1012 University St.   |
| Morrison, Lucile May.....<br>Grand Junction.           | R. R. No. 2           |
| Mosley, William Garrison.....<br>Denver.               | 1327 Arapahoe St.     |
| Musser, Ruth Marie.....<br>Denver.                     | 1143 Broadway         |
| Nafe, Helen Malcolm.....<br>Boulder.                   | 1704 Pine St.         |
| Nelson, Marguerite.....<br>Boulder.                    | 1068 12th St.         |
| Nichols, Percy Harold.....<br>Paonia.                  | 983 14th St.          |
| Niven, Harold Franklin.....<br>Berthoud.               | 1335 Grand View Ave.  |
| Oliver, Alice Prudence.....<br>Boulder.                | 955 Lincoln Place     |
| Osgood, Mary.....<br>Denver.                           | 900 Lincoln Place     |
| Owens, Clyde Meehan.....<br>Keota.                     | 1315 11th St.         |
| Parfet, Grace Marie.....<br>Golden.                    | 1061 11th St.         |
| Parkhill, Forbes Jesse.....<br>Boulder.                | 1075 14th St.         |
| Patton, Ursula.....<br>Boulder.                        | 933 Mapleton Ave.     |
| Paul, Ruth Dunlap.....<br>Denver.                      | 1041 Grand View Ave.  |
| Persons, Lucile Irene.....<br>Mansfield, South Dakota. | 1165 12th St.         |
| Peterson, Elvera.....<br>Idaho Springs.                | 1209 Spruce St.       |
| Pickens, Mary Olive.....<br>Denver.                    | 1012 University St.   |
| Pigg, Frank Burton.....<br>Denver.                     | 1017 14th St.         |



| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------|------------------------|
| Pollock, William Cramer.....<br>Campbell, Missouri. | 1125 10th St.          |
| Prescott, Katherine Isolette.....<br>Littleton.     | 921 11th St.           |
| Putnam, Stella Bertha.....<br>Boulder.              | 1033 14th St.          |
| Read, Margaret.....<br>Boulder.                     | 525 Mapleton Ave.      |
| Reed, Walter Kellogg.....<br>Boulder.               | 2044 Walnut St.        |
| Rapetschnig, Emma Jennie.....<br>Victor.            | 957 Grand View Ave.    |
| Reynolds, James Price.....<br>Eaton.                | 1077 14th St.          |
| Richardson, Wave Marie.....<br>Pueblo.              | 1153 Pleasant St.      |
| Rickard, Sarah May.....<br>Monte Vista.             | 957 Grand View Ave.    |
| Robb, Raymond E.....<br>Monte Vista.                | 934 14th St.           |
| Roberts, Ruth Evelyn.....<br>Idaho Springs.         | 1127 Broadway          |
| Robinson, Elizabeth.....<br>Boulder.                | 838 University St.     |
| Robison, Ralph Turner.....<br>Fort Morgan.          | 1203 Pennsylvania Ave. |
| Rohwer, Elsie.....<br>Boulder.                      | 624 Pine St.           |
| Rollman, Minnie.....<br>Leadville.                  | 1141 11th St.          |
| Rowland, Jay Miller.....<br>Boulder.                | 819 Spruce St.         |
| Ryan, William Bernard.....<br>Denver.               | 1145 13th St.          |
| Salberg, Joseph Brunold.....<br>Boulder.            | North 19th St.         |
| Sanborn, Ruth Dorothy.....<br>Boulder.              | 603 Highland Ave.      |
| Saunders, Paul Canfield.....<br>Boulder.            | 827 Maxwell Ave.       |
| Schaedla, Veta Eleanor.....<br>Boulder.             | 639 Mapleton Ave.      |
| Schamel, Franc Marion.....<br>Boulder.              | 1112 Maxwell Ave.      |

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE.      |
|-------------------------------------------------------|----------------------------|
| Scott, Pauline.....<br>Denver.                        | 1456 12th St.              |
| Selleck, Elizabeth Fay.....<br>Durango.               | 1090 13th St.              |
| Shattuck, Barbara.....<br>Boulder.                    | 1605 Hillside Road         |
| Sherrill, Samuel Burdon.....<br>Canon City.           | 1119 Broadway              |
| Sibbald, Garth E. W.....<br>Boulder.                  | 1229 University St.        |
| Simons, Edith.....<br>Boulder.                        | 2325 19th St.              |
| Slater, Opal.....<br>Boulder.                         | 803 Marine St.             |
| Small, G. Elizabeth.....                              | 1325 Broadway              |
| Smith, Harriett.....<br>Longmont.                     | 1041 Grand View Ave.       |
| Smith, Robert Gunson.....<br>Montclair.               | 1135 Broadway              |
| Snell, Lolita.....<br>Boulder.                        | 1406 Pine St.              |
| Sorenson, Helen Caroline.....                         | 12th St. and East 8th Ave. |
| Stearns, Robert Lawrence.....<br>Denver.              | 1210 Pleasant St           |
| Stein, William Peter.....<br>Eagle.                   | 1136 Pleasant St.          |
| Steinhardt, Ernest H.....<br>Leroy.                   | University Place           |
| Stemen, David Christian.....<br>Denver.               | 1044 Pleasant St.          |
| Stevens, Henry Carlisle.....<br>Boulder.              | East Pine St.              |
| Stillwagon, Nellie.....<br>Glenwood, Iowa.            | 1044 University St.        |
| Streamer, Charles Walker.....<br>Boulder.             | 2520 Pearl St.             |
| Strong, Kathryn E.....<br>Springfield, Massachusetts. | 1233 Broadway              |
| Swartwood, Harold Paul.....<br>Waseca, Minnesota.     | 1067 13th St.              |
| Swayne, Ida Loyd.....<br>Fort Worth, Texas.           | 930 Lincoln Place          |

| NAME AND HOME RESIDENCE.                           | UNIVERSITY RESIDENCE. |
|----------------------------------------------------|-----------------------|
| Tallmadge, Harold C.....<br>Denver.                | 1325 13th St.         |
| Tarkoff, Blossom Marguerite.....<br>Montrose.      | 1083 13th St.         |
| Templeton, Hassell.....<br>Boulder.                | 1012 University St.   |
| Templeton, Nelle Ethel.....<br>Boulder.            | 1012 University St.   |
| Thompson, Lloyd G.....<br>Grand Island, Nebraska.  | 1107 13th St.         |
| Thorpe, Alice C.....<br>Trinidad.                  | 1143 Broadway         |
| Thorson, Carlisle John.....<br>Boulder.            | 2137 Pine St.         |
| Titus, Campbell Dickson, Jr.....<br>Denver.        | 1037 12th St.         |
| Titus, Esbon Yokum.....<br>Denver.                 | 1828 Pine St.         |
| Tour, Isabel Sophia.....<br>Pueblo.                | 1935 Grove St         |
| Treize, Ethel Irene.....<br>Boulder.               | 1005 Spruce St.       |
| Truxal, Mary Elizabeth.....<br>Hoisington, Kansas. | 1141 11th St.         |
| Turner, Annie Laurie.....<br>Woodland Park.        | 1012 University St.   |
| Ullery, Fred Lee.....<br>Colorado Springs.         | 1038 University St.   |
| Vincent, Wendell.....<br>Boulder.                  | 1146 Pleasant St.     |
| Vivian, Chauncey.....<br>Golden.                   | 1421 Broadway         |
| Wagner, Catherine Mary.....<br>Denver.             | 1456 12th St.         |
| Wagner, Willard Burch.....<br>Denver.              | 1058 13th St.         |
| Wahrenberger, William Frederick.....<br>Denver.    | 1005 14th St.         |
| Waldo, Hubert Devotion.....<br>Denver.             | 1036 14th St.         |
| Wallace, Westel Bruce.....<br>Denver.              | 1127 12th St.         |
| Ward, Paul William.....<br>Boulder.                | 1514 Walnut St.       |

| NAME AND HOME RESIDENCE.                       | UNIVERSITY RESIDENCE. |
|------------------------------------------------|-----------------------|
| Waters, Albert Pattison.....<br>Denver.        | 1155 13th St.         |
| Westerman, Leslie Conrad.....<br>Breckenridge. | 1052 12th St.         |
| Weyerbacher, Leah.....<br>Boulder.             | 947 University St.    |
| Whitson, Glenn Haverly.....<br>Boulder.        | 1119 Broadway         |
| Wiebelt, Stella Marie.....<br>Arvada.          | 956 Marine St.        |
| Willett, Ethelyn.....<br>Golden.               | 1090 13th St.         |
| Wood, Vera.....<br>Denver.                     | 1090 13th St.         |
| Woods, Charles Cook.....<br>Laredo, Missouri.  | 1229 University St.   |
| Woods, Ruth.....<br>Laredo, Missouri.          | 1165 Broadway         |
| Wyatt, Marjorie Deane.....<br>Denver.          | 1143 Broadway         |
| Zahnen, Helena Katherine.....<br>Monte Vista.  | 1031 13th St.         |

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## SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.                 | UNIVERSITY RESIDENCE. |
|------------------------------------------|-----------------------|
| Bare, Gineva H.....<br>Mansfield, Ohio.  | Boulderado Hotel      |
| Beebe, John Dickson.....<br>Denver.      | 973 14th St.          |
| Brewster, Edith Navarre.....<br>Boulder. | 1601 Hillside Road    |
| Brush, Jessie.....<br>Boulder.           | 1038 University St.   |
| Burger, Myrtle M.....<br>Boulder.        | 955 Regent St.        |
| Cleaves, Sara.....<br>Denver.            | 969 10th St.          |
| Condit, Harrison.....<br>Boulder.        | 2141 Water St.        |
| Coolidge, Eva Cole.....<br>Boulder.      | 930 Lincoln Place     |

| NAME AND HOME RESIDENCE.                          | UNIVERSITY RESIDENCE. |
|---------------------------------------------------|-----------------------|
| Crandell, Marion Grosvenor.....<br>Boulder.       | 919 Pine St.          |
| Curry, Sherman Adams.....<br>Owensboro, Kentucky. | 1083 14th St.         |
| Denman, Nettie Isabella.....<br>Boulder.          | 576 Marine St.        |
| Gordon, Amy.....<br>Washington, D. C.             | 1149 12th St.         |
| Gray, Alice Louise.....<br>Denver.                | 1119 Broadway         |
| Gregory, Maude Sturdevant.....<br>Denver.         | 1139 12th St.         |
| Hansen, Julianne Grace.....<br>Boulder.           | 576 Marine St.        |
| Hopkins, Lillian Russell.....<br>Boulder.         | 432 Pine St.          |
| Jobe, Estelle Louise.....<br>Boulder.             | 1515 Spruce St.       |
| Jones, Paul J.....<br>Elgin, Illinois.            | 1125 Pleasant St.     |
| Kessler, Frederick Carl .....                     | 1507 Pine St.         |
| Kilpatrick, Sarah.....<br>Boulder.                | 1012 14th St.         |
| Kitchen, Treva E.....<br>Spencer, Ohio.           | 1125 Pleasant St.     |
| Kumler, Mary M.....<br>Manzanola.                 | 1143 Broadway         |
| LaCroix, Henry Lenord.....<br>Denver.             | University Place      |
| Lindstrom, Clara Matilda.....<br>Sterling.        | 972 14th St.          |
| Lindstrom, Mary Elizabeth.....<br>Ames, Nebraska. | Woman's Cottage       |
| Louthan, Ethelyn.....<br>Canton, Missouri.        | 1233 Broadway         |
| Mason, Claribel.....<br>La Junta.                 | 1027 Pine St.         |
| McRae, Roy Gabriel.....<br>Trenton, Missouri.     | 1109 13th St.         |
| Odlum, Marguerite E.....<br>Boulder.              | 921 Marine St.        |
| Orton, Ezek David.....<br>Longmont.               | Men's Dormitory       |

| NAME AND HOME RESIDENCE.                                      | UNIVERSITY RESIDENCE. |
|---------------------------------------------------------------|-----------------------|
| Potter, Roy L.....<br>Rocky Ford.                             | 1229 University St.   |
| Richardson, Dio.....<br>Boulder.                              | 1061 14th St.         |
| Ripley, Barbara.....<br>Boulder.                              | "The Alps"            |
| Robbins, Jack L.....<br>Denver.                               | 1620 Euclid Ave.      |
| Staub, Walter J.....<br>Thompson, North Dakota.               | 1104 University St.   |
| Teplitsky, Catherine.....<br>Denver.                          | 1902 Goss St.         |
| Towns, Theo.....<br>New York, New York.                       | 963 11th St.          |
| Tull, Elvon Lee.....<br>Boulder.                              | 28th and Walnut Sts.  |
| Unseld, George Peterkin.....<br>Shepherdstown, West Virginia. | 973 14th St.          |
| Wessell, Lillian Day.....<br>Boulder.                         | 743 Marine St.        |



# COLLEGE OF ENGINEERING

## SENIOR CLASS

| NAME AND HOME RESIDENCE.                                       | COURSE.   | UNIVERSITY RESIDENCE.  |
|----------------------------------------------------------------|-----------|------------------------|
| Blake, Roland Patton.....<br>Montrose.                         | Ch.E..... | 1713 15th St.          |
| Brown, Frank Logan.....<br>St. Joseph, Missouri.               | C.E.....  | 1069 Lincoln Place     |
| Brown, Ralph Leigh.....<br>Pueblo.                             | M.E.....  | 1210 Pleasant St.      |
| Cowell, Franklin Wier.....<br>Denver.                          | C.E.....  | 1210 Pleasant St.      |
| DeRemer, James Silas.....<br>Glenwood Springs.                 | E.E.....  | 1837 Spruce St.        |
| Dierstein, Arthur Lewis.....<br>Leadville.                     | C.E.....  | 1315 11th St.          |
| Duff, Arthur Mitchael.....<br>Versailles, Missouri.            | C.E.....  | University Shops       |
| Fawcett, Charles De Van.....<br>Boulder.                       | E.E.....  | 1515 Marine St.        |
| Finley, Robert Byron.....<br>Craig.                            | E.E.....  | 1125 10th St.          |
| Gilligan, Frank Thomas.....<br>Boulder.                        | E.E.....  | 937 South Broadway     |
| Giroux, Roy Mortimer.....<br>Boulder.                          | E.E.....  | 429 Highland Ave.      |
| Hall, James Arthur.....<br>Del Norte.                          | C.E.....  | 1135 Pennsylvania Ave. |
| Hart, Alexander Piatt.....<br>Boulder.                         | E.E.....  | 720 Mapleton Ave.      |
| Hartford, Fred Dailey.....<br>Berthoud.                        | C.E.....  | 1129 11th St.          |
| Heinz, Langley.....<br>Boulder.                                | C.E.....  | 2236 17th St.          |
| Johnston, Alexander Laughlin....<br>Rathburn, Ontario, Canada. | E.E.....  | 1557 9th St.           |
| Kelly, Alfred Allen.....<br>Victor.                            | M.E.....  | 1131 University St.    |

| NAME AND HOME RESIDENCE.                                            | COURSE.   | UNIVERSITY RESIDENCE.  |
|---------------------------------------------------------------------|-----------|------------------------|
| Kurtz, Julius.....<br>Denver.                                       | E.E.....  | 1081 11th St.          |
| Lamb, James Graham, B.A.....<br>University of Colorado.<br>Greeley. | Ch.E..... | 1058 13th St.          |
| Madden, Maurice Michael.....<br>Aspen.                              | C.E.....  | 1227 Pine St.          |
| Mathis, Charles Clifford.....<br>Boulder.                           | E.E.....  | 1624 Hill St.          |
| Matthews, George.....<br>Central City.                              | E.E.....  | 1205 13th St.          |
| McClurg, Verne Orva.....<br>Boulder.                                | C.E.....  | 966 10th St.           |
| McNeil, Orange Malcolm.....<br>Boulder.                             | C.E.....  | 1069 Lincoln Place     |
| O'Brien, John Thomas.....<br>Cripple Creek.                         | E.E.....  | 1131 University St.    |
| Osborne, Verton Outwater.....<br>Montrose.                          | E.E.....  | Men's Dormitory        |
| Pease, Carl James.....<br>Denver.                                   | E.E.....  | 1706 Athens St.        |
| Prince, Ernest.....<br>Boulder.                                     | E.E.....  | 1841 Athens St.        |
| Prouty, Winfred Lafayette.....<br>Denver.                           | C.E.....  | 1105 11th St.          |
| Rachofsky, Morris Oscar.....<br>Durango.                            | E.E.....  | 1073 Lincoln Place     |
| Read, Lee Wheeler.....<br>Council Bluffs, Iowa.                     | E.E.....  | 1135 Pennsylvania Ave. |
| Rohde Earnest Conrad.....<br>State Centre, Iowa.                    | C.E.....  | 1145 Grand View Ave.   |
| Rose, John G.....<br>Palisades.                                     | C.E.....  | 1146 Pleasant St.      |
| Shulters, Gardner Alvah.....<br>Boulder.                            | C.E.....  | 865 12th St.           |
| Sperry, Charles Stillman, Jr.....<br>Newport, Rhode Island.         | C.E.....  | 1305 University St.    |
| Stocker, Harry Short.....<br>Denver.                                | C.E.....  | 1155 13th St.          |
| Tomlinson, Harley Elba.....<br>Denver.                              | C.E.....  | 1153 Pleasant St.      |
| Vernia, Harry Edwin.....<br>Cripple Creek.                          | C.E.....  | 1135 Pennsylvania Ave. |
| Wightman, James Wesley.....<br>Denver.                              | E.E.....  | 1205 13th St.          |

## JUNIOR CLASS

| NAME AND HOME RESIDENCE.                              | COURSE.   | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------|-----------|------------------------|
| Abel, Richard James.....<br>Denver.                   | E.E.....  | 1045 Pennsylvania Ave. |
| Accola, Edward Conrad.....<br>Pueblo.                 | M.E.....  | 1229 University St.    |
| Alling, Arthur R.....<br>Fort Collins.                | C.E.....  | 1125 Pleasant St.      |
| Belz, Clifford Curtis.....<br>Conrad, Iowa.           | Ch.E..... | 1091 14th St.          |
| Blakey, Marcus Austin.....<br>Boulder.                | M.E.....  | 1067 13th St.          |
| Bloch, Marx.....<br>Georgetown.                       | C.E.....  | 1140 10th St.          |
| Briggs, Alfred Poyneer.....<br>Hollywood, California. | Ch.E..... | 1441 12th St.          |
| Carver, Walter Lewis.....<br>Steamboat Springs.       | E.E.....  | 1130 10th St.          |
| Cragin, Harold Paul.....<br>New York, New York.       | Ch.E..... | 1210 Pleasant St.      |
| Crawford, Charles Ivan.....<br>Leadville.             | C.E.....  | 1131 University St.    |
| Crisman, Clarence Obed.....<br>Denver.                | C.E.....  | 1229 University St.    |
| Day, Calvin Lester.....<br>Durango.                   | C.E.....  | Engineering Building   |
| DesBrisay, George Stephen.....<br>Boulder.            | C.E.....  | 2053 Hill St.          |
| Dodds, Eugene Haddock.....<br>La Junta.               | Ch.E..... | 1315 11th St.          |
| Doerner, Henry Alfred.....<br>Denver.                 | Ch.E..... | 1105 11th St.          |
| DuVall, Willet Clinton.....<br>Fruita.                | E.E.....  | 1507 Pine St.          |
| Eaton, Albert Budd.....<br>Boulder.                   | C.E.....  | 643 Mapleton Ave.      |
| Fickes, Leland Stanford.....<br>Sterling.             | E.E.....  | 1609 Marine St.        |
| Flynn, Ned.....<br>Boulder.                           | C.E.....  | 1109 13th St.          |
| Fraser, Andrew Chauncey.....<br>Boulder.              | E.E.....  | 534 Mapleton Ave.      |
| French, Carson Tracy.....<br>Denver.                  | C.E.....  | 1140 10th St.          |

| NAME AND HOME RESIDENCE.                             | COURSE.  | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------|----------|------------------------|
| Gayton, Robert Fischer.....<br>Denver.               | C.E..... | 1045 Pennsylvania Ave. |
| Giroux, Carl H.....<br>Boulder.                      | E.E..... | 429 Highland Ave.      |
| Greenwood, Arthur Irving.....<br>Hotchkiss.          | E.E..... | 1133 Pleasant St.      |
| Hamsher, John Lewis.....<br>Boulder.                 | C.E..... | 1515 11th St.          |
| Hartman, Warden Nathan.....<br>Longmont.             | M.E..... | 1105 11th St.          |
| Hull, Robert Harsh.....<br>Denver.                   | E.E..... | 1135 Pennsylvania Ave. |
| Huntington, Glen Herbert.....<br>Denver.             | C.E..... | 1210 Pleasant St.      |
| Irish, Willis Luther.....<br>Moorhead, Iowa.         | E.E..... | 1609 Marine St.        |
| Johnson, Walter H.....<br>Golden.                    | E.E..... | 1029 University St.    |
| Kettering, Walter Henry.....<br>Boulder.             | E.E..... | 2039 Pine St.          |
| Lambdin, Ross McPherson.....<br>Waco, Texas.         | C.E..... | 1052 12th St.          |
| Lawrence, Abraham Max.....<br>Trinidad.              | C.E..... | 1315 11th St.          |
| Leonard, Lynn Ruliff.....<br>Boulder.                | E.E..... | 2330 13th St.          |
| Limprecht, Elwood George.....<br>Durango.            | M.E..... | Engineering Building   |
| Lonnecker, George Vye.....<br>Canon City.            | E.E..... | 1052 12th St.          |
| Lummis, Herbert Clare.....<br>Montclair, New Jersey. | C.E..... | 1155 13th St.          |
| Markley, Walter Raymond.....<br>Montrose.            | E.E..... | 1221 Pennsylvania Ave. |
| Mason, Marion Albert.....<br>Boulder.                | E.E..... | 917 Pleasant St.       |
| McGinnis, William Lynn.....<br>Boulder.              | C.E..... | 497 Arapahoe St.       |
| McKinney, Harry David.....<br>Pueblo.                | E.E..... | 1045 Pennsylvania Ave. |
| Merrill, James Lynn.....<br>Boulder.                 | C.E..... | 821 Mapleton Ave.      |
| Messinger, Lawrence Winn.....<br>Denver.             | E.E..... | 1441 12th St.          |

| NAME AND HOME RESIDENCE.                                          | COURSE.  | UNIVERSITY RESIDENCE.      |
|-------------------------------------------------------------------|----------|----------------------------|
| Moulton, Victor Channing.....<br>Meeker.                          | E.E..... | 1229 University St.        |
| Mueller, Charles Augustus.....<br>Gunnison.                       | E.E..... | 1067 13th St.              |
| Nelson, William Joseph.....<br>Georgetown.                        | E.E..... | 1131 University St.        |
| Newkirk, Guy St. Clair.....<br>Denver.                            | C.E..... | 1133 Pleasant St.          |
| Patterson, Joseph Towne.....<br>Denver.                           | E.E..... | 1315 11th St.              |
| Phillips, George Burton.....<br>Fruita.                           | E.E..... | 1027 Pennsylvania Ave.     |
| Pigg, Wilfred Leroy.....<br>Denver.                               | E.E..... | 1058 13th St.              |
| Rachofsky, Oscar Morris.....<br>Central City.                     | C.E..... | 706 Pine St.               |
| Randell, William Edward.....<br>Pueblo.                           | E.E..... | 1052 12th St.              |
| Raymond, Harold Newnham.....<br>St. Johns, New Brunswick, Canada. | E.E..... | 1205 13th St.              |
| Rich, John Dillon.....<br>Boulder.                                | C.E...   | Mt. St. Gertrude's Academy |
| Ritter, Carl Antony.....<br>Denver.                               | E.E..... | 1441 12th St.              |
| Rupp, Harry Kent.....<br>Monument.                                | C.E..... | 1052 12th St.              |
| Rymer, Dana Clyde.....<br>Spring Lake, Michigan.                  | C.E..... | City Y. M. C. A.           |
| Schwer, Gus Leo.....<br>Pueblo.                                   | M.E..... | 976 Pleasant St.           |
| Skerry, Harry Allen.....<br>Denver.                               | C.E..... | 1146 Pleasant St.          |
| Spicer, Leonard Ellsworth.....<br>La Junta.                       | E.E..... | 1133 Pleasant St.          |
| Sproule, Turner Lumley.....<br>Eagle.                             | M.E..... | 1122 Pleasant St.          |
| Tregellas, John Leland.....<br>Grafton, West Virginia.            | C.E..... | 1045 Pennsylvania Ave.     |
| Twiss, Robert H.....<br>Denver.                                   | E.E..... | 531 Arapahoe St.           |
| Van Gundy, Cecil.....<br>Cheyenne, Wyoming.                       | C.E..... | 1052 12th St.              |
| Warkley, John Crosswell.....<br>Cheyenne, Wyoming.                | C.E..... | 1517 Arapahoe St.          |

| NAME AND HOME RESIDENCE.     | COURSE.  | UNIVERSITY RESIDENCE.                  |
|------------------------------|----------|----------------------------------------|
| Wightman, Irving Leslie..... | E.E..... | 1205 13th St.<br>Denver.               |
| Woods, Rae Dean.....         | C.E..... | 1140 Grand View Ave.<br>Ravenna, Ohio. |
| Youtsey, Otho Elbert.....    | E.E..... | 1058 13th St.<br>Fort Collins.         |

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## SOPHOMORE CLASS

| NAME AND HOME RESIDENCE.          | COURSE.   | UNIVERSITY RESIDENCE.                     |
|-----------------------------------|-----------|-------------------------------------------|
| Alsop, George Ralph.....          | C.E.....  | 1155 13th St.<br>Vincennes, Indiana.      |
| Anderson, Fred George.....        | C.E.....  | 1637 Grove St.<br>Denver.                 |
| Armor, Claude Arnett.....         | E.E.....  | Men's Dormitory<br>Denver.                |
| Barker, Lawrence Ward.....        | C.E.....  | 1151 10th St.<br>Denver.                  |
| Blair, Tom Arthur.....            | C.E.....  | 2350 12th St.<br>Montrose.                |
| Blomgren, Walter Edward.....      | C.E.....  | 1105 11th St.<br>Boise, Idaho.            |
| Bogue, Joseph Creswell.....       | Ch.E..... | 1058 13th St.<br>Denver.                  |
| Bonner, Clyde Rayburn.....        | C.E.....  | South Broadway<br>Boulder.                |
| Brace, Porter Hiscock.....        | E.E.....  | 1105 11th St.<br>Denver.                  |
| Bradfield, Louis George.....      | M.E.....  | 1105 11th St.<br>Greeley.                 |
| Cavers, Robert Lionel Gilbert.... | E.E.....  | 1135 Pennsylvania Ave.<br>Denver.         |
| Christian, William Jacob.....     | M.E.....  | 1107 13th St.<br>Denver.                  |
| Coulter, Harold Boyd.....         | M.E.....  | 1004 Pleasant St.<br>St. Louis, Missouri. |
| Cressingham, Richard Harry.....   | E.E.....  | Men's Dormitory<br>Denver.                |
| Davenport, Neil Emerson.....      | C.E.....  | 1131 University St.<br>Salida.            |
| Elliott, Preston Green.....       | E.E.....  | 1705 Marine St.<br>Boulder.               |



| NAME AND HOME RESIDENCE.                                  | COURSE.  | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------------|----------|------------------------|
| Ellsberg, Harry.....<br>Denver.                           | C.E..... | Men's Dormitory        |
| Eveland, George Harmon.....<br>Boulder.                   | E.E..... | 1044 10th St.          |
| Forsyth, Carl Payne.....<br>Boulder.                      | C.E..... | 2124 Pine St.          |
| Gartland, Frank Joseph.....<br>Denver.                    | E.E..... | 1131 University St.    |
| Gleim, Ernest John.....<br>Denver.                        | E.E..... | 1229 13th St.          |
| Griffin, Marvin Clay.....<br>Brighton.                    | E.E..... | 1204 Pleasant St.      |
| Hall, John Temple.....<br>Boulder.                        | E.E..... | 615 Highland Ave.      |
| Hamilton, William Coulter.....<br>Morristown, New Jersey. | C.E..... | 1045 Pennsylvania Ave. |
| Hart, Louis Ireland.....<br>Boulder.                      | M.E..... | 720 Mapleton Ave.      |
| Hartman, Warren.....<br>Longmont.                         | M.E..... | 1105 11th St.          |
| Huiskamp, Henry Christian.....<br>Keokuk, Iowa.           | M.E..... | 1045 University St.    |
| Jeffrey, William Maxson.....<br>Boulder.                  | C.E..... | City Library           |
| Jones, Benjamin Franklin.....<br>Center.                  | C.E..... | 1405 Broadway          |
| Jones, Leonard Charles.....<br>Boulder.                   | C.E..... | 2327 21st St.          |
| Kantner, Wesley Harris.....<br>Denver.                    | C.E..... | 1054 Grant Place       |
| Kettle, James Robert Patrick....<br>Canon City.           | C.E..... | 1135 Broadway          |
| Koenig, Samuel Adolph.....<br>Golden.                     | E.E..... | 1135 Pennsylvania Ave. |
| Kopfer, William Budder.....<br>Denver.                    | E.E..... | 1083 14th St.          |
| Leisten, Henry Paul.....<br>Aspen.                        | M.E..... | 1105 11th St.          |
| Lines, George Emery.....<br>Salida.                       | C.E..... | 1131 University St.    |
| List, Alvin Fred.....<br>Denver.                          | E.E..... | 1031 13th St.          |
| MacArthur, Allan Early.....<br>Boulder.                   | M.E..... | 1537 9th St.           |

| NAME AND HOME RESIDENCE.                            | COURSE.   | UNIVERSITY RESIDENCE.  |
|-----------------------------------------------------|-----------|------------------------|
| Mallory, George Elwood.....<br>Boulder.             | Ch.E..... | 915 9th St.            |
| Mallory, Walter Frank.....<br>Boulder.              | M.E.....  | 915 9th St.            |
| McEwen, Ralph Glendon.....<br>Preemption, Illinois. | C.E.....  | 1083 14th St.          |
| Meyer, Ralph Elwood.....<br>Denver.                 | E.E.....  | 1122 Pleasant St.      |
| Middaugh, Freeman.....<br>Denver.                   | M.E.....  | 1058 13th St.          |
| Morrison, Leroy Pake.....<br>Boulder.               | C.E.....  | Y. M. C. A.            |
| Moses, Raymond George.....<br>Denver.               | E.E.....  | 1058 13th St.          |
| O'Connell, William Ward.....<br>Georgetown.         | C.E.....  | 1140 10th St.          |
| Penley, Benjamin.....<br>Delta.                     | M.E.....  | 1514 Walnut St.        |
| Perry, Harry Raymond.....<br>Aspen.                 | M.E.....  | 1720 14th St.          |
| Pile, Edwin Daniel Boone.....<br>Sedan, Kansas.     | C.E.....  | 1155 13th St.          |
| Purmort, George Eli .....                           | C.E.....  | 1131 University St.    |
| Rehm, Herbert Eugene.....<br>Indianapolis, Indiana. | C.E.....  | 1045 Pennsylvania Ave. |
| Roloson, Glenn Bruno.....<br>Creston.               | E.E.....  | 1140 Grand View Ave.   |
| Foyce, Clarence Louis.....<br>Denver.               | C.E.....  | 1165 13th St.          |
| Russell, Austin Phelps.....<br>Boulder.             | C.E.....  | 846 Pine St.           |
| Sawyer, Arthur Lathrup.....<br>Greeley.             | C.E.....  | 1129 11th St.          |
| Short, Clarence Robert.....<br>Lime.                | C.E.....  | 1133 Pleasant St.      |
| Smith, Wayne Everett.....<br>Colorado Springs.      | E.E.....  | 1089 13th St.          |
| Steele Leslie Rodney.....<br>Boulder.               | Ch.E..... | 8th Ave. and 14th St.  |
| Stewart, Eugene.....<br>Golden.                     | E.E.....  | 1029 University St.    |
| Swift, Frank William.....<br>Denver.                | E.E.....  | 1131 University St.    |

| NAME AND HOME RESIDENCE.                        | COURSE.   | UNIVERSITY RESIDENCE. |
|-------------------------------------------------|-----------|-----------------------|
| Tobey, Harry Warner.....<br>Boulder.            | C.E.....  | 833 Spruce St.        |
| Traxler, Harry Walter.....<br>Lamar.            | C.E.....  | 1138 Pleasant St.     |
| Unger, Samuel Max.....<br>Florence.             | Ch.E..... | 1079 14th St.         |
| Viets, Floyd Harvey.....<br>Rifle.              | E.E.....  | 1405 Broadway         |
| Watrous, Wallace Edwin.....<br>Monte Vista.     | E.E.....  | 1133 Pleasant St.     |
| Wheatley, Walter Hannum.....<br>Denver.         | C.E.....  | 1205 13th St.         |
| Wheeler, Frank Dow.....<br>Sterling, Illinois.  | C.E.....  | 1138 Pleasant St.     |
| White, Raymond Merriman.....<br>Longmont.       | M.E.....  | 1165 13th St.         |
| Winter, Boyd Wahl.....<br>Santa Fe, New Mexico. | E.E.....  | Men's Dormitory       |
| Wolff, Deane Jackson.....<br>Boulder.           | C.E.....  | 1041 Grand View Ave.  |
| Uyeda, Seizo.....<br>Fukuoka, Japan.            | E.E.....  | 1112 University St.   |

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## FRESHMAN CLASS

| NAME AND HOME RESIDENCE.                         | COURSE.  | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------|----------|------------------------|
| Baird, Earl Rolland.....<br>Boulder.             | C.E..... | 1135 Pennsylvania Ave. |
| Baker, R. Merritt.....<br>Denver.                | E.E..... | 1091 14th St.          |
| Baker, Wilfred W.....<br>Meeker.                 | C.E..... | 1705 14th St.          |
| Baldock, R. Hugh.....<br>Primero.                | M.E..... | 1091 14th St.          |
| Barrier, Grover Watkin.....<br>Glenwood Springs. | E.E..... | 1405 12th St.          |
| Berry, Charles Bennett.....<br>Denver.           | E.E..... | 1155 13th St.          |
| Bergheim, Milton Nachman.....<br>Boulder.        | E.E..... | 1313 Pine St.          |
| Bitner, Albert Henry.....<br>Boulder.            | M.E..... | 2031 8th St.           |

| NAME AND HOME RESIDENCE.                     | COURSE.   | UNIVERSITY RESIDENCE.                    |
|----------------------------------------------|-----------|------------------------------------------|
| Blake, Noble Ernest.....<br>Jefferson, Iowa. | M.E.....  | 966 10th St.                             |
| Borden, Philip Sheridan.....                 | E.E.....  | 1013 Portland Place<br>Boulder.          |
| Bowler, James Richard.....                   | E.E.....  | 1058 13th St.<br>Montclair.              |
| Bunger, Howard Phelps.....                   | C.E.....  | 1820 Grove St.<br>Edgewater.             |
| Burton, William Ernest.....                  | E.E.....  | 1140 10th St.<br>Medicine Lodge, Kansas. |
| Cargo, Robert Wayne.....                     | M.E.....  | 1105 11th St.<br>Denver.                 |
| Clark, Everett Francis.....                  | M.E.....  | 1075 14th St.<br>Denver.                 |
| Cook, Richard Scofield.....                  | Ch.E..... | 1161 11th St.<br>La Junta.               |
| Copps, Chauncey Stoddard.....                | M.E.....  | 1540 Pine St.<br>Boulder.                |
| Davenport, Ralph Martin.....                 | M.E.....  | 1012 14th St.<br>Denver.                 |
| Davies, William Morris.....                  | E.E.....  | 1091 14th St.<br>Trinidad.               |
| Davis, Joseph Campbell.....                  | E.E.....  | 1920 Athens St.<br>Sedgwick.             |
| Davison, Elmer Clarence.....                 | M.E.....  | 969 Regent St.<br>Salida.                |
| DeMarais, Albert Edward.....                 | M.E.....  | 1545 Pearl St.<br>Aspen.                 |
| DeMarais, Howard Arthur.....                 | Ch.E..... | 1545 Pearl St.<br>Aspen.                 |
| Doland, James Joseph.....                    | C.E.....  | 1044 Pleasant St.<br>Denver.             |
| Donovan, John Theodore.....                  | C.E.....  | 1165 13th St.<br>Longmont.               |
| Downing, Roderick Lyle.....                  | C.E.....  | 1086 13th St.<br>Lamar.                  |
| Eckel, Clarence Louis.....                   | C.E.....  | Men's Dormitory<br>Denver.               |
| Evans, Frank A.....                          | E.E.....  | 1012 14th St.<br>Joplin, Missouri.       |
| Fallis, Myrlin Stein.....                    | M.E.....  | University Place<br>Denver.              |
| Fauber, Herman.....                          | E.E.....  | 1221 Pennsylvania Ave.<br>Montrose.      |

| NAME AND HOME RESIDENCE.                          | COURSE.   | UNIVERSITY RESIDENCE.  |
|---------------------------------------------------|-----------|------------------------|
| Fiske, Rogers Allen.....<br>Santa Fe, New Mexico. | M.E.....  | Men's Dormitory        |
| Floyd, Faye Noble.....<br>Trinidad.               | E.E.....  | 1091 14th St.          |
| Galloway, Gerald Fogarty.....<br>London, England. | C.E.....  | 1232 South 20th St.    |
| Garlinghouse, Albert Frederick...<br>Canon City.  | C.E.....  | 1205 13th St.          |
| Giger, Joe.....<br>Greeley.                       | E.E.....  | 1935 Grove St.         |
| Gould, Jack Jabez.....<br>Huron, Arizona.         | E.E.....  | 920 Mapleton Ave.      |
| Gregg, Lloyd Ernest.....<br>Grandlake.            | C.E.....  | 1426 Pearl St.         |
| Griffin, John Homer.....<br>Denver.               | C.E.....  | 1210 Pleasant St.      |
| Grisham, Clarence Linley.....<br>Trinidad.        | C.E.....  | 1133 Pleasant St.      |
| Hageman, George Watson.....<br>Edgewater.         | E.E.....  | 1820 Grove St.         |
| Hennebold, August Balthasar, Jr..<br>Pueblo.      | E.E.....  | 1041 13th St.          |
| Hobson, David Anthony.....<br>Denver.             | E.E.....  | Men's Dormitory        |
| House, Harry Francis.....<br>Boulder.             | E.E.....  | City Y. M. C. A.       |
| Hubbard, Erle Emerson.....<br>Glenwood Springs.   | E.E.....  | 1133 Pleasant St.      |
| Jackson, Lawrence Oscar.....<br>Denver.           | C.E.....  | 1216 College Ave.      |
| Jakway, Paul Russell.....<br>Durango.             | Ch.E..... | 1083 14th St.          |
| Jesse, August Lawrence.....<br>Akron.             | Ch.E..... | 1816 Grove St.         |
| Johnson, Eric.....<br>Berthoud.                   | M.E.....  | 1335 Grand View Ave.   |
| Johnson, Harlan Swank.....<br>Denver.             | E.E.....  | City Y. M. C. A.       |
| Jones, Kirby Viglini.....<br>Denver.              | C.E.....  | 1045 Pennsylvania Ave. |
| Kennedy, Kenneth Adams.....<br>Denver.            | C.E.....  | 1229 University St.    |
| Kerr, Henry Hamilton.....<br>Denver.              | E.E.....  | 902 Marine St.         |

| NAME AND HOME RESIDENCE.                             | COURSE.   | UNIVERSITY RESIDENCE. |
|------------------------------------------------------|-----------|-----------------------|
| Koller, William Wesley.....<br>Denver.               | E.E.....  | 1005 14th St.         |
| Lippard, Leon Hayward.....<br>Salida.                | Ch.E..... | 1232 S. 20th St.      |
| Lotz, Ernest Martin, Jr.....<br>Manitou.             | M.E.....  | 1844 Athens St.       |
| Lotz, John Shields.....<br>Manitou.                  | Ch.E..... | 1844 Athens St.       |
| Lumsden, Will Frank.....<br>Grand Junction.          | E.E.....  | 1140 10th St.         |
| Lynch, Charles Ramsdell.....<br>Denver.              | E.E.....  | 1075 14th St.         |
| McKelvey, Clinton Fiske.....<br>Denver.              | E.E.....  | 1540 Grove St.        |
| McMurray, Welcome.....<br>Denver.                    | E.E.....  | 1155 13th St.         |
| McNeil, Elbert Kerr.....<br>Boulder.                 | C.E.....  | P. O. Box 645         |
| Merrill, Lloyd Riggs.....<br>Jacksonville, Illinois. | E.E.....  | 1080 13th St.         |
| Milhan, David Nelson.....<br>Fowler.                 | C.E.....  | 1315 11th St.         |
| Miller, Charles.....<br>Sheridan, Wyoming.           | E.E.....  | 935 Marine St.        |
| Moreland, Alfred David.....<br>Denver.               | E.E.....  | 1122 Pleasant St.     |
| Morris, Earl Silvester.....<br>Pueblo.               | C.E.....  | 969 Regent St.        |
| Moyle, Matt William.....<br>Boulder.                 | Ch.E..... | 2314 Arapahoe St.     |
| Muth, Karl Ludovic.....<br>Aguilar.                  | E.E.....  | 1844 Athens St.       |
| Nelson, Emil Raymond.....<br>Longmont.               | M.E.....  | 1165 13th St.         |
| Oakford, Leon Martin.....<br>Denver.                 | E.E.....  | 1426 Pearl St.        |
| Olin, Joe Cotton.....<br>Denver.                     | E.E.....  | 1129 11th St.         |
| Ornauer, Raymond Arthur.....<br>Denver.              | E.E.....  | 1843 Grove St.        |
| Page, Walter Chatfield.....<br>Grand Junction.       | Ch.E..... | 1140 10th St.         |
| Palmer, Frank Ernest.....<br>Denver.                 | E.E.....  | University Place      |



| NAME AND HOME RESIDENCE.                               | COURSE.   | UNIVERSITY RESIDENCE.  |
|--------------------------------------------------------|-----------|------------------------|
| Park, John Charles.....<br>Greeley.                    | M.E.....  | 1441 12th St.          |
| Parkhill, Clayton.....<br>Boulder.                     | E.E.....  | 1075 14th St.          |
| Paul, Lesley Coolidge.....<br>Cherborn, Massachusetts. | C.E.....  | University Place       |
| Pearce, William Rolph.....<br>Denver.                  | C.E.....  | 1044 Pleasant St.      |
| Peterson, David Wallace.....<br>Denver.                | E.E.....  | 1843 Grove St.         |
| Redd, Sam Bertram.....<br>Denver.                      | C.E.....  | 1210 Pleasant St.      |
| Redding, Frank Allen.....<br>Idaho Springs.            | E.E.....  | 1161 11th St.          |
| Roberts, Wilbur.....<br>Decatur, Illinois.             | M.E.....  | 1146 Pleasant St.      |
| Rockhold, Kenneth Edward.....<br>Burlington, Iowa.     | Ch.E..... | 485 Arapahoe St.       |
| Rohr, Charles Samuel.....<br>Glenwood Springs.         | E.E.....  | 1133 Pleasant St.      |
| Sato, Nisa.....<br>Nagoya, Japan.                      | M.E.....  | 1135 Pennsylvania Ave. |
| Saviers, John Smith.....<br>Canon City.                | M.E.....  | 1119 Broadway          |
| Sells, Charles Harvey.....<br>Fort Lupton.             | C.E.....  | 1038 University St.    |
| Shattuck, Lucien Hunt.....<br>Boulder.                 | C.E.....  | 1605 Hillside Road     |
| Shugren, Maurice Ulysses.....<br>Denver.               | E.E.....  | 902 Marine St.         |
| Smith, Paul Vanderlip.....<br>Colorado Springs.        | E.E.....  | 1205 13th St.          |
| Smith, Ralph James.....<br>Denver.                     | C.E.....  | Men's Dormitory        |
| Snyder, Clarence Lane.....<br>Denver.                  | E.E.....  | 1820 Grove St.         |
| Soderstrom, Carl Axel.....<br>Denver.                  | E.E.....  | 1221 Pennsylvania Ave. |
| Stead, Charles Wentworth.....<br>Leadville.            | E.E.....  | 1221 Pennsylvania Ave. |
| Stebbins, Wilbur LeRoy.....<br>Golden.                 | E.E.....  | 1029 University        |
| Summerton, Kent Alkire.....<br>Denver.                 | E.E.....  | 1125 Pleasant St.      |

| NAME AND HOME RESIDENCE.                            | COURSE.  | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------|----------|-----------------------|
| Sweitzer, Leonard Edward.....<br>Delta.             | E.E..... | 1012 14th St.         |
| Taketa, Shiro.....<br>Hiroshima, Japan.             | E.E..... | 1133 Grandview        |
| Taylor, Oliver Emery.....<br>Craig.                 | C.E..... | 1125 10th St.         |
| Tebeau, Robert Eugene.....<br>Denver.               | E.E..... | 1125 Pleasant St.     |
| Teter, Roy George.....<br>Fairplay.                 | C.E..... | 1232 South 20th St.   |
| Tomlinson, Lee Glenn.....<br>Denver.                | C.E..... | 1153 Pleasant St.     |
| True, Charles A.....<br>Boulder.                    | M.E..... | 1456 12th St.         |
| Tyler, Carl Stow.....<br>Denver.                    | C.E..... | 1165 13th St.         |
| Walker, James Douglas.....<br>Santa Fe, New Mexico. | M.E..... | Men's Dormitory       |
| Waterman, Ralph Douglas.....<br>Denver.             | C.E..... | 1044 Pleasant St.     |
| Weber, Walter Raymond.....<br>Denver.               | E.E..... | 1037 12th St.         |
| White, Edward Divine.....<br>Cripple Creek.         | C.E..... | 1221 University St.   |
| Williams, Perry Elbridge.....<br>Golden.            | E.E..... | 2113 Pine St.         |
| Young, Raymond Everitt.....<br>Morrison.            | E.E..... | University Place      |

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### SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.                          | UNIVERSITY RESIDENCE. |
|---------------------------------------------------|-----------------------|
| McBride, John Cumming.....<br>Boulder.            | City Y. M. C. A.      |
| Smith, Robert Nelson.....<br>Spokane, Washington. | 1155 13th St.         |
| Slye, John Dallison.....<br>Boulder.              | 15th St. and 2nd Ave. |
| Wadsworth, Lyle.....<br>Pueblo.                   | 1058 13th St.         |

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# SCHOOL OF MEDICINE

## FOURTH YEAR CLASS

| NAME AND HOME RESIDENCE.        | *UNIVERSITY RESIDENCE.                            |
|---------------------------------|---------------------------------------------------|
| Anderson, Jennie Henriette..... | 151 West 4th Ave.<br>Denver.                      |
| Boyd, Charles Arthur.....       | 1329 Acoma St.<br>Stafford, Kansas.               |
| Cain, Raymond William.....      | First Avenue Hotel<br>Denver.                     |
| Gallison, Cyrus Oscar.....      | 1625 Tremont St.<br>Kellogg, Iowa.                |
| Cohen, Samuel Bartholomew.....  | 2221 Emerson St.<br>Denver.                       |
| Cook, Clarence Percy.....       | 2125 South Pennsylvania St.<br>San Bonito, Texas. |
| Crawford, William W.....        | 64 West Alameda Ave.<br>Denver.                   |
| Dinsmore, William Sidney.....   | 1316 East Fourteenth Ave.<br>Denver.              |
| Edgar, Ammy Ballinger.....      | 1045 East Colfax Ave.<br>Decatur, Illinois.       |
| Ewing, Harry Chester.....       | 459 Ogden St.<br>Larned, Kansas.                  |
| Ham, Lillian Beecher.....       | 1827 Humboldt St.<br>Johnson, Vermont.            |
| Henry, Jonathan Edward.....     | 1329 Acoma St.<br>Oak Hill, Alabama.              |
| Hills, Willard.....             | 1428 Cherokee St.<br>Colorado Springs.            |
| Johnson, Ross Ward.....         | 1016 Kalamath St.<br>Denver.                      |
| Kennedy, J. Carman.....         | St. Anthony's Hospital<br>Denver.                 |
| Kindall, Cleve Edwin.....       | 467 Ogden St.<br>Paonia.                          |

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\* In Denver.

| NAME AND HOME RESIDENCE.      | *UNIVERSITY RESIDENCE.                          |
|-------------------------------|-------------------------------------------------|
| Kracaw, Austin R.....         | Steele Hospital<br>Telluride.                   |
| Lamme, James McGrew.....      | 467 Ogden St.<br>Starkville.                    |
| Loomis, John L.....           | 624 13th St.<br>Demossville, Kentucky.          |
| Lowe, Wilbur.....             | 1343 Acoma St.<br>Portland, Oregon.             |
| McKeown, Ady Roy.....         | 156 South Cherokee St.<br>Letts, Iowa.          |
| Ochiai, Sosuke.....           | 1811 Pearl St.<br>Saitama, Japan.               |
| Pahlas, Henry Martin.....     | 28 East Tenth Ave.<br>Elkader, Iowa.            |
| Palmer, Alfred Merle.....     | 467 Ogden St.<br>Oxford, Idaho.                 |
| Peltier, William Henry.....   | 2244 Vine St.<br>Denver.                        |
| Pines, John Andrew.....       | 1428 Cherokee St.<br>Woodward, Iowa.            |
| Poley, Cyrus Watts.....       | 566 Ogden St.<br>Boulder.                       |
| Rambo, Cyrus Cleveland.....   | 2125 South Pennsylvania St.<br>Keosauqua, Iowa. |
| Rhoades, Emory James.....     | 228 Broadway<br>Lake View, Ohio.                |
| Ridley, Edward Rayburn.....   | 1915 Logan St.<br>Puyallup, Washington.         |
| Robinson, Henry Eugene.....   | 1307 Welton St.<br>Hooper, Utah.                |
| Schoen, Walter Albert.....    | 1244 Grant St.<br>Victor.                       |
| Shelton, Eberle Kost, Jr..... | 1728 Emerson St.<br>Denver.                     |
| Smith, Frank Burton.....      | 459 Ogden St.<br>Elwood, Nebraska.              |
| Tiffin, Charles Calvin.....   | 1234 Bannock St.<br>Boulder.                    |
| Weinberger, Joseph.....       | 2462 Glenarm Place<br>Denver.                   |
| Willett, Frederick Ewing..... | 151 West Fourth Ave.<br>Woodbine, Iowa.         |
| Wiggin, Mary Ila.....         | First Avenue Hotel<br>Boston, Massachusetts.    |
| Workman, Cloyd W.....         | 467 Ogden St.<br>Denver.                        |

## THIRD YEAR CLASS

| NAME AND HOME RESIDENCE.        | *UNIVERSITY RESIDENCE.                     |
|---------------------------------|--------------------------------------------|
| Andrus, Adellon Devilla.....    | 1244 Grant St.<br>Ashland, Wisconsin.      |
| Blanchard, Winthrop Eugene..... | 2501 Franklin St.<br>Denver.               |
| Bosworth, Ralph Lyman.....      | 2900 Vine St.<br>Denver.                   |
| Bussey, Harry Stewart.....      | 2507 Clarkson St.<br>Denver.               |
| Carmichael, Paul Wiles.....     | 1545 Pearl St.<br>Trinidad.                |
| Champlin, Harry Howard.....     | 1667 Harrison St.<br>Roscoe, New York.     |
| Currigan, Martin Dominic.....   | 2720 Lafayette St.<br>Afton, Iowa.         |
| Davis, Chapman Watson.....      | 860 Monroe St.<br>Ocala, Virginia.         |
| Dyer, Wallace Curtis.....       | 1273 Vine St.<br>Evansville, Indiana.      |
| Erich, Augustus Frederick.....  | Y. M. C. A.<br>Paonia.                     |
| Evalson, Samuel Gustavus.....   | 1659 Broadway<br>Denver.                   |
| Evans, Francis Joseph.....      | 4220 Lipan St.<br>Denver.                  |
| Finnoff, William Christ.....    | 2772 Dunkeld Place<br>Denver.              |
| Hanson, Fitch Phelps.....       | 1405 Cherokee St.<br>Big Rapids, Michigan. |
| Hodnett, Will Perkins.....      | 2900 Vine St.<br>Danville, Virginia.       |
| Horton, Thomas Clair.....       | 520 East First Ave.<br>Summerfield, Ohio.  |
| Hubbard, Lamont Arthur.....     | 2709 Douglas Place<br>Nederland, Texas.    |
| King, Robert Washington.....    | 1137 Vine St.<br>Denver.                   |
| Lewis, William Benjamin.....    | 433 West Colfax Ave.<br>Louisville.        |
| Likes, Lanning E.....           | 1545 Pearl St.<br>Des Moines, Iowa.        |

\* In Denver.

## NAME AND HOME RESIDENCE.

## \*UNIVERSITY RESIDENCE.

|                                |                                                |
|--------------------------------|------------------------------------------------|
| McKenzie, Charles Duncan.....  | 360 Delaware St.<br>Denver.                    |
| Miller, Samuel Warren, Jr..... | 1273 Vine St.<br>Denver.                       |
| Minato, Kenji.....             | 1827 Park Ave.<br>Akashi, Japan.               |
| Mitchell, Luther Ebert.....    | 1244 Grant St.<br>Cheyenne, Wyoming.           |
| Moffett, John Jellison.....    | 1671 Washington St.<br>Clinton, Iowa.          |
| Philpott, James A.....         | 1545 Pearl St.<br>Canon City.                  |
| Reiss, Theodore Herzog.....    | 917 Acoma St.<br>Denver.                       |
| Sheldon, Roy Faust.....        | 124 Grant St.<br>Beatrice, Nebraska.           |
| Smith, Richard Gilchrist.....  | 367 Cherokee St.<br>Pueblo.                    |
| Smith, Erle Fisk.....          | 1223 Emerson St.<br>Pueblo.                    |
| Stahl, Arthur William.....     | 1325 East 34th Ave.<br>Denver.                 |
| Strate, Lester Kenneth.....    | 624 Thirteenth St.<br>Hastings, Nebraska.      |
| Sutter, Loe Albright.....      | 1411 Cherokee St.<br>Boulder.                  |
| Tobin, Peter Arthur.....       | 1264 Corona St.<br>Denver.                     |
| Walker, George Stephen.....    | 2827 West 29th Ave.<br>New Haven, Connecticut. |
| Walker, Thomas Franklin.....   | 249 West 12th Ave.<br>Kokomo.                  |
| Waterhouse, John Edward.....   | Westminster College<br>New Orleans, Louisiana. |
| Weber, Frederick Henry.....    | 433 West Colfax Ave.<br>Craig.                 |
| Williams, Louis Aloysius.....  | 1125 Eighteenth St.<br>Sand Center, Minnesota. |
| Yamaguchi, Shuichi.....        | 1307 Welton St.<br>Gifu, Japan.                |
| Zimmerman, William.....        | 4134 Osage St.<br>Denver.                      |



## SECOND YEAR CLASS

| NAME AND HOME RESIDENCE.                                                            | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------------------------------------|------------------------|
| Archibald, Edward Glenn.....<br>Boulder.                                            | 1419 Spruce St.        |
| Ashbaugh, Roy Asquith.....<br>Denver.                                               | 900 Lincoln Place      |
| Block, Leon.....<br>Pueblo.                                                         | 1203 Pennsylvania Ave. |
| Boyd, Francis Marion.....<br>Glen Elder, Kansas.                                    | 1165 13th St.          |
| Burket, Robert Smith.....<br>Denver.                                                | 1205 13th St.          |
| Carmichael, Earle Keller.....<br>Trinidad.                                          | 1058 13th St.          |
| Cary, Guy Clifton.....<br>Boulder.                                                  | 930 14th St.           |
| Cecchini, Augustine Santini.....<br>Denver.                                         | University Place       |
| Clark, Maurice Arthur.....<br>Boulder.                                              | 1001 Spruce St.        |
| Coffin, Merrill Morris.....<br>Oskaloosa, Iowa.                                     | 1121 University St.    |
| Darrow, Cecil Howard.....<br>Elwood, Indiana.                                       | 2035 Spruce St.        |
| DeVries, Albert.....<br>Denver.                                                     | 1135 Broadway          |
| Eakins, Clemens Franklin.....<br>Blakesburg, Iowa.                                  | 1080 14th St.          |
| Eglee, Edward Percy, B.A.....<br>University of Colorado.<br>Flushing, New York.     | 1205 13th St.          |
| Fezer, Florence.....<br>Greeley.                                                    | 1143 Broadway          |
| Fitzsimmons, Charles Erasmus.....<br>Denver.                                        | 1203 Pennsylvania Ave. |
| Groomer, Araminta Alice.....<br>Duncan.                                             | 1602 Water St.         |
| Gwinn, Laurence Miles.....<br>Victor, Iowa.                                         | 1135 Broadway          |
| Haskell, Edward Earle.....<br>Alexandria, Minnesota.                                | 948 Marine St.         |
| Heaton, Archibald Burdette, B.S.( E.E.).....<br>University of Colorado.<br>Boulder. | 1305 17th St.          |

| NAME AND HOME RESIDENCE.                                               | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------------------------|------------------------|
| Hill, C. Ernest.....<br>Richwood, Ohio.                                | 1058 13th St.          |
| Hills, Carl Clifford.....<br>Boulder.                                  | 956 University St.     |
| Hills, Whitford Carl.....<br>Denver.                                   | 1037 12th St.          |
| Hotchkiss, Walter Kendrick.....<br>Denver.                             | 1107 12th St.          |
| Kemble, Earl Wallace.....<br>Golden.                                   | 1029 University St.    |
| Kindall, Lloyd Elmer.....<br>Paonia.                                   | 1107 12th St.          |
| Kindig, Zoe Zita.....<br>Denver.                                       | 1127 Broadway          |
| Kopciowsky, Annie.....<br>Denver.                                      | 1620 Euclid Ave.       |
| LaCroix, Mrs. Ray Kruse.....<br>Denver.                                | University Place       |
| Langdon, George William.....<br>Buena Vista.                           | City Y. M. C. A.       |
| Leyda, James Harold.....<br>Denver.                                    | 1107 12th St.          |
| Maclean, William Archibald.....<br>Leadville.                          | 1210 Pleasant St.      |
| Margot, Arthur.....<br>Denver.                                         | 1165 13th St.          |
| McLauthlin, Carl Addison.....<br>Denver.                               | 1229 University St.    |
| Morse, Roy Adelbert.....<br>Hanson, Idaho.                             | 935 Marine St.         |
| Mugrage, Edward Rosseter, M.A.....<br>University of Denver.<br>Denver. | 1107 12th St.          |
| Newton, Edward Kellan.....<br>Crown Point, Indiana.                    | 1107 12th St.          |
| Nordby, Frederick Jorgen.....<br>Boise, Idaho.                         | 1107 12th St.          |
| Passover, Lucy Lloyd.....<br>Englewood.                                | 1057 13th St.          |
| Peebler, Ray Earl.....<br>Aurora, Missouri.                            | 1203 Pennsylvania Ave. |
| Rapp, John Henry.....<br>La Junta.                                     | 1107 12th St.          |

| NAME AND HOME RESIDENCE.                                                            | UNIVERSITY RESIDENCE. |
|-------------------------------------------------------------------------------------|-----------------------|
| Shea, Robert Macfeely.....<br>St. Louis, Missouri.                                  | University Place      |
| Shisler, John William.....<br>Miami, Florida.                                       | University Place      |
| Singer, Orville Upton.....<br>Clearfield, Iowa.                                     | 1107 12th St.         |
| Stenhouse, Henry Merritt.....<br>Denver.                                            | 1205 13th St.         |
| Stiffler, Martin Luther.....<br>Pueblo.                                             | 1210 Pleasant St.     |
| Stuver, Henry William.....<br>Elgin, Utah.                                          | City Y. M. C. A.      |
| Swaggart, Luman Birch.....<br>Eldora, Iowa.                                         | 1122 Portland Place   |
| Swartz, Fred George.....<br>Boulder.                                                | 1147 Lincoln Place    |
| Symon, William Gardiner.....<br>Denver.                                             | 1129 13th St.         |
| Taylor, Ray Robinson.....<br>Pueblo.                                                | 1229 University St.   |
| Talbot, Robert Emmet.....<br>Denver.                                                | 1205 13th St.         |
| Turner, May, M.S.....<br>Ohio Northern University.<br>Barboursville, West Virginia. | Boulderado Hotel      |
| Tye, Vibart Burl.....<br>Arvada.                                                    | 2236 12th St.         |
| Vivian, Charles Smiley.....<br>Denver.                                              | 1121 University St.   |
| Walton, Clarence Lewis.....<br>Plainwell, Michigan.                                 | University Place      |
| Weston, Parker Knox.....<br>Manchester, New Hampshire.                              | University Place      |
| Whitmore, David Paul.....<br>Denver.                                                | City Y. M. C. A.      |

## FIRST YEAR CLASS

| NAME AND HOME RESIDENCE.                      | UNIVERSITY RESIDENCE. |
|-----------------------------------------------|-----------------------|
| Blackman, Carl Reed.....<br>Colorado Springs. | 1107 12th St.         |
| Callaway, William Otis.....<br>Boulder.       | 1129 13th St.         |

| NAME AND HOME RESIDENCE.                              | UNIVERSITY RESIDENCE.  |
|-------------------------------------------------------|------------------------|
| House, Lewis Clinton.....<br>Bicknell, Indiana.       | 1000 Grand View Ave.   |
| Knuckey, Clyde Thomas.....<br>Lamar.                  | 2028 Spruce St.        |
| McMahan, Alvin Mann.....<br>El Reno, Oklahoma.        | 1000 Grand View Ave.   |
| Mishkind, Jacob.....<br>Denver.                       | 1620 Euclid Ave.       |
| Norris, Joseph Patrick.....<br>Manitou.               | 1203 Pennsylvania Ave. |
| Proffitt, Ray Verne.....<br>Gunnison.                 | 1005 12th St.          |
| Shapiro, Joseph Max.....<br>Denver.                   | 1620 Euclid Ave.       |
| Stafford, Earle Foster.....<br>Boston, Massachusetts. | 951 Lincoln Place      |
| Woodward, Harry Whiting.....<br>Colorado Springs.     | University Place       |

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## SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.                           | UNIVERSITY RESIDENCE. |
|----------------------------------------------------|-----------------------|
| Avery, Willard S.....<br>Boulder.                  | 2471 12th St.         |
| Castleman, Frank Riley.....<br>Hamilton, New York. | 1204 Pleasant St.     |
| Swanson, Arthur Leonard.....<br>Denver.            | City Y. M. C. A.      |

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# SCHOOL OF LAW

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## THRD YEAR CLASS

| NAME AND HOME RESIDENCE.           | UNIVERSITY RESIDENCE.                                                       |
|------------------------------------|-----------------------------------------------------------------------------|
| Armor, William Roy.....            | Men's Dormitory<br>Denver.                                                  |
| Bailey, George Jarbeau.....        | 1105 11th St.<br>Fort Collins.                                              |
| Beeler, Lewis Frederic.....        | 904 14th St.<br>Mankato, Kansas.                                            |
| Blickhahn, George Henry.....       | 1627 17th St.<br>Walsenburg.                                                |
| Bonnell, Herbert Forman.....       | 1058 13th St.<br>Loveland.                                                  |
| Bonner, Quentin Daniel.....        | 1086 13th St.<br>Leadville.                                                 |
| Bowman, Lyle Alexander.....        | 1131 University St.<br>Salida.                                              |
| Clark, John Robert.....            | 973 14th St.<br>Cortez.                                                     |
| Crowder, George Alfred.....        | 1205 13th St.<br>Cripple Creek.                                             |
| Cunningham, Arthur James.....      | 1205 13th St.<br>Beloit, Wisconsin.                                         |
| Downer, George Spelman.....        | 1205 13th St.<br>Denver.                                                    |
| Erickson, Bernhard Malcom.....     | 1145 13th St.<br>El Moro.                                                   |
| Hedgcock, Charles Gordon, B.A..... | 1004 Pleasant St.<br>University of Colorado.<br>East Las Vegas, New Mexico. |
| Kennedy, William Riddell.....      | 1012 14th St.<br>Denver.                                                    |
| Knous, William L.....              | 1086 13th St.<br>Ouray.                                                     |
| Lewis, Ailey William.....          | Brainard Block<br>Carnegie, Pennsylvania.                                   |

| NAME AND HOME RESIDENCE.                                                                | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------------------------------------------|-----------------------|
| Macaulay, Frederick Robertson, M.A.....<br>University of Colorado.<br>Montreal, Canada. | 932 15th St.          |
| Morgan, Clarence William.....                                                           | 1527 Pine St.         |
| Champaign, Illinois.                                                                    |                       |
| Morris, Sidney McCagg.....                                                              | 1058 13th St.         |
| Oskaloosa, Iowa.                                                                        |                       |
| Sackett, Samuel Albert.....                                                             | 1001 Arapahoe St.     |
| Boulder.                                                                                |                       |
| Snyder, Earl Tyndall, B.A.....                                                          | 1065 13th St.         |
| University of Colorado.                                                                 |                       |
| Greeley.                                                                                |                       |
| Stidger, John Silcott.....                                                              | City Y. M. C. A.      |
| Fort Collins.                                                                           |                       |
| Stewart, Alexander Thomas, Jr.....                                                      | Men's Dormitory       |
| Pueblo.                                                                                 |                       |
| Sutton, Walter Cleveland.....                                                           | 1627 17th St.         |
| Boulder.                                                                                |                       |
| Tyvand, Henry Albert.....                                                               | 1004 Pleasant St.     |
| Mt. Horeb, Wisconsin.                                                                   |                       |
| Waldo, William Beadle.....                                                              | 1205 13th St.         |
| Canon City.                                                                             |                       |
| Wilson, Clifford Allen.....                                                             | 1089 13th St.         |
| Hot Springs, South Dakota.                                                              |                       |

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## SECOND YEAR CLASS

| NAME AND HOME RESIDENCE.       | UNIVERSITY RESIDENCE. |
|--------------------------------|-----------------------|
| Andrus, Ralph Roscoe.....      | 1205 13th St.         |
| Denver.                        |                       |
| Bliss, Charles Nelson.....     | 2431 Hill St.         |
| Boulder.                       |                       |
| Bottum, Frank.....             | 1058 13th St.         |
| Aberdeen, South Dakota.        |                       |
| Brinker, Waller Chenault.....  | 840 14th St.          |
| Boulder.                       |                       |
| Carr, Ralph Lawrence, B.A..... | 1441 12th St.         |
| University of Colorado.        |                       |
| Cripple Creek.                 |                       |
| Cook, Charles Christopher..... | Men's Dormitory       |
| McLean, Texas.                 |                       |
| Crawford, Paul William.....    | 1065 10th St.         |
| Pueblo.                        |                       |



| NAME AND HOME RESIDENCE.                                                             | UNIVERSITY RESIDENCE. |
|--------------------------------------------------------------------------------------|-----------------------|
| Davis, Fred W.....<br>Seattle, Washington.                                           | 1005 12th St.         |
| Delaney, Frank Leo.....<br>Meeker.                                                   | Men's Dormitory       |
| Ellis, Erl Hubert, B.A.....<br>University of Colorado.<br>Denver.                    | 1830 16th St.         |
| Grabill, Ralph Gillespie.....<br>Denver.                                             | 1229 University St.   |
| Heit, Ezra Selleck.....<br>Clyde, New York.                                          | 934 14th St.          |
| Hinman, Willis Rexford.....<br>Mt. Vernon, Washington.                               | 2035 Spruce St.       |
| Killgore, John Perry.....<br>Fort Collins.                                           | City Y. M. C. A.      |
| Kimbrough, George Francis.....<br>Denver.                                            | 1058 13th St.         |
| King, Gordon Worthington.....<br>Villa Grove.                                        | 969 Regent St.        |
| Laird, Roy Hummel.....<br>Pueblo.                                                    | 2035 Spruce St.       |
| LeVeque, Grant Claudius.....<br>Boulder.                                             | 965 11th St.          |
| Lichty, Carl Tobias, B.A.....<br>University of Colorado.<br>Bethlehem, Pennsylvania. | 1004 14th St.         |
| Mitchell, Leonard C.....<br>Trull.                                                   | City Y. M. C. A.      |
| O'Brien, Robert Rolland.....<br>Denver.                                              | 1229 University St.   |
| O'Rourke, John Bernard.....<br>Boulder.                                              | 828 Marine St.        |
| Parrish, John Festus, B.A.....<br>University of Colorado.<br>Lamar.                  | 1005 12th St.         |
| Rundles, Guy.....<br>Huntertown, Indiana.                                            | 1089 13th St.         |
| Tanton, Ray George.....<br>Salida.                                                   | 1131 University St.   |
| Thurman, Ren L.....<br>London Mills, Illinois.                                       | 1135 Broadway         |
| Venables, Raymond Joseph, B.A.....<br>University of Colorado.<br>Boulder.            | 1037 12th St.         |

## NAME AND HOME RESIDENCE.

## UNIVERSITY RESIDENCE.

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Vivian, John Charles.....        | 1421 Broadway<br>Golden.                            |
| Wilson, Oliver Chester, B.A..... | 1155 13th St.<br>University of Colorado.<br>Denver. |

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## FIRST YEAR CLASS

## NAME AND HOME RESIDENCE.

## UNIVERSITY RESIDENCE.

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| Barbrick, John Timothy.....        | 1229 University St.<br>Pueblo.              |
| Bond, Eugene Alva.....             | 1155 13th St.<br>Royston, Georgia.          |
| Colter, Harry Elmer.....           | 1138 Pleasant St.<br>Meeker.                |
| Cook, Harry Earnest.....           | Men's Dormitory<br>Shelby, Iowa.            |
| Crouter, Errol Louis Edgerton..... | 1086 13th St.<br>Wheatland, Wyoming.        |
| Culver, George Warren.....         | 1105 11th St.<br>Fort Collins.              |
| Denzler, Walter Arnold.....        | 1045 University St.<br>Leadville.           |
| Drinkwater, Russell Robert.....    | 1229 University St.<br>Denver.              |
| Dunklee, Edward Vaughan.....       | 973 14th St.<br>Denver.                     |
| Elwell, Lyman Timothy.....         | 1161 11th St.<br>Pueblo.                    |
| Giacomini, Lawrence George.....    | 1131 University St.<br>Sterling.            |
| Gleyre, Louis Allen.....           | 1145 13th St.<br>Pueblo.                    |
| Healy, Harold Harris.....          | 1005 12th St.<br>Denver.                    |
| Jones, Charles Crockett.....       | 1140 Grand View Ave.<br>Flagstaff, Arizona. |
| Kabell, Louis, Jr.....             | 1456 12th St.<br>Vernal, Utah.              |
| Kelly, Leo Patrick.....            | 1229 University St.<br>Pueblo.              |
| Kemp, Frank Alexander, Jr.....     | 1210 Pleasant St.<br>Denver.                |

| NAME AND HOME RESIDENCE.                                                        | UNIVERSITY RESIDENCE.  |
|---------------------------------------------------------------------------------|------------------------|
| Kubichek, Ernest J.....<br>Horton, Kansas.                                      | 1703 14th St.          |
| Lannon, John Albert.....<br>Pueblo.                                             | Men's Dormitory        |
| Lockhart, Ferd James.....<br>Kansas City, Missouri.                             | 1441 12th St.          |
| Marvin, Leonard Waldo.....<br>Boulder.                                          | 1044 University St.    |
| Matheny, William Howard.....<br>Pueblo.                                         | 1121 University St.    |
| McClelland, James Robert.....<br>Idaho Springs.                                 | Men's Dormitory        |
| McConnell, Giley Richard.....<br>Fort Lupton.                                   | Boulderado Hotel       |
| McCutchen, Melville Malcom.....<br>Denver.                                      | 952 Marine St.         |
| McEwen, Harry Arthur.....<br>Durango.                                           | Men's Dormitory        |
| McFadden, John Francis.....<br>Denver.                                          | 1105 11th St.          |
| Millikin, Eugene Donald.....<br>Hamilton, Ohio.                                 | 1038 University St.    |
| Miller, Herbert Alonzo.....<br>Fort Morgan.                                     | 1138 12th St.          |
| Mills, Jared Warner.....<br>Denver.                                             | 1229 University St.    |
| Montgomery, Victor A.....<br>Boulder.                                           | 27th and Walnut Sts.   |
| Morris, Robert Charles.....<br>Pueblo.                                          | 969 Regent St.         |
| Nafe, John Paul.....<br>Boulder.                                                | 2124 17th St.          |
| Olmstead, Albert William, B.A.....<br>Greenville College.<br>Chicago, Illinois. | Boulderado Hotel       |
| Parrish, Jay Megran.....<br>Denver.                                             | 1205 13th St.          |
| Payne, Ira Daniel.....<br>Loveland.                                             | 1620 Grove St.         |
| Rigby, Charles Percy.....<br>Meeker.                                            | 1135 Pennsylvania Ave. |
| Saboe, Martin Luther.....<br>Longmont.                                          | 1105 11th St.          |

| NAME AND HOME RESIDENCE.                                 | UNIVERSITY RESIDENCE.  |
|----------------------------------------------------------|------------------------|
| Storer, Todd Clement.....<br>Pueblo.                     | 1005 12th St.          |
| Strever, Arthur Edwin.....<br>Boulder.                   | 2637 5th St.           |
| Strever, William John.....<br>Berthoud.                  | 2531 5th St.           |
| Swain, George Warner.....<br>Fort Morgan.                | 1107 13th St.          |
| Talbot, Lawrence Daly.....<br>Denver.                    | 1205 13th St.          |
| Taubman, Morton McKinley.....<br>Aberdeen, South Dakota. | 1058 13th St.          |
| Valdez, Antonio Jose Nerio.....<br>Del Norte.            | 1203 Pennsylvania Ave. |
| Wood, Joseph Gardner.....<br>Haxtum.                     | 1135 Broadway          |

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## SPECIAL STUDENTS

| NAME AND HOME RESIDENCE.                                                          | UNIVERSITY RESIDENCE. |
|-----------------------------------------------------------------------------------|-----------------------|
| Cresto Joseph J.....<br>Trinidad.                                                 | 983 14th St.          |
| Hart, John Wesley.....<br>Denver.                                                 | 904 14th St.          |
| Pearson, Ross.....<br>Leadville.                                                  | 1603 Arapahoe St.     |
| Pierrot, Adolph George, Ph.B.....<br>University of Chicago.<br>Chicago, Illinois. | 1511 12th St.         |
| Simpson, Marvin Alden.....<br>Denver.                                             | 904 14th St.          |
| Williams, R. Russell.....<br>Primghar, Iowa.                                      | O'Connor Hotel        |

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## SUMMER SESSION STUDENTS, 1910

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| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE.  |
|------------------------------------------------------|------------------------|
| Adams, Bertha.....<br>Madison, Illinois.             | 724 Spruce St.         |
| Alexander, Charles Freeman.....<br>Stockton, Kansas. | 525 Highland Ave.      |
| Anderson, Winifred.....<br>Boulder.                  | 1135 Pennsylvania Ave. |
| Arneill, Sara T.....<br>Denver.                      | 1221 University St.    |
| Arnson, Rhoda.....<br>Niagara Falls, New York.       | Tolland                |
| Atkinson, Guy.....<br>New York, New York.            | 1335 Grand View Ave.   |
| Bailey, Neola Nathaniel.....<br>Acworth, Texas.      | 1844 Athens St.        |
| Baird, Itonia Jessie.....<br>Denver.                 | 1109 13th St.          |
| Baker, Helen Hilton.....<br>Boulder.                 | University Campus      |
| Baker, Hilton Vaughn.....<br>Boulder.                | University Campus      |
| Beatty, Belle.....<br>Bartlesville, Oklahoma.        | 1165 12th St.          |
| Bedard, Mildred Hope.....<br>Boulder.                | 1063 Mapleton          |
| Bennett, Rexie Ellen.....<br>Boulder.                | 1145 10th St.          |
| Bergheim, Milton N.....<br>Boulder.                  | 1313 Pine St.          |
| Blakey, Marcus Austin.....<br>Boulder.               | 972 14th St.           |
| Blakey, Roy G.....<br>Boulder.                       | 972 14th St.           |
| Boyd, Byron Bennett.....<br>Denver.                  | 1205 13th St.          |
| Bright, Florence Z.....<br>Corsicana, Texas.         | 724 Spruce St.         |

| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE.       |
|------------------------------------------------------|-----------------------------|
| Broadfoot, Albert Sidney.....<br>Leonard, Texas.     | 1135 11th St.               |
| Brown, Florence.....<br>Obion, Tennessee.            | 1135 Pennsylvania Ave.      |
| Bruderlin, Katherine Maria.....<br>Denver.           | Tolland                     |
| Burch, Iva.....<br>Bartlesville, Oklahoma.           | 915 9th St.                 |
| Burdick, Nina Gracia.....<br>Grand Rapids, Michigan. | Tolland                     |
| Burger, Abraham M.....<br>Boulder.                   | 1080 14th St.               |
| Cameron, Effie Estella.....<br>Keswick, Iowa.        | 1045 Pennsylvania Ave.      |
| Campbell, Claude Melnotte.....<br>Boulder.           | 522 Pine St.                |
| Cannell, Lillian Ethel.....<br>Boulder.              | 1089 13th St.               |
| Castleman, Frank Riley.....<br>Hamilton, New York.   | 1204 Pleasant St.           |
| Clapp, Cecile Ardella.....<br>Boulder.               | 17th St. and Columbine Ave. |
| Clark, Lennice Lindsay.....<br>Balckon, Missouri.    | 1125 Pleasant St.           |
| Clark, Pearl.....<br>Cheyenne Wells.                 | Boulderado Hotel            |
| Clark, Winifred.....<br>Denver.                      | 1061 12th St.               |
| Coghlan, Ora Agnes F.....<br>Socorro, New Mexico.    | 821 Mapleton Ave.           |
| Coleman, Lucile G.....<br>Warrensburg, Missouri.     | 1107 13th St.               |
| Coleman, Mary O.....<br>Warrensburg, Missouri.       | 1107 13th St.               |
| Cornell, Benjamin David.....<br>Louisville.          | 1133 Pleasant St.           |
| Crary, Irwin Winfield.....<br>Boulder.               | Hotel Boulderado            |
| Crary, Ruth Naomi.....<br>Boulder.                   | 1445 17th St.               |
| Culver, George Warren.....<br>Fort Collins.          | 1135 11th St.               |
| Dague, Roswell.....<br>Boulder.                      | 724 Spruce St.              |



| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.  |
|----------------------------------|------------------------|
| Davis, Jessie Anne.....          | University Place       |
| Fort Collins.                    |                        |
| Denton, Edna.....                | 1045 Pennsylvania Ave. |
| Nevada, Missouri.                |                        |
| Denton, Lutie Winifred.....      | 1045 Pennsylvania Ave. |
| Nevada, Missouri.                |                        |
| DeVoss, James Clarence.....      | 1327 6th St.           |
| Boulder.                         |                        |
| Donnelly, Anna Elizabeth.....    | 655 Arapahoe Ave.      |
| Denver.                          |                        |
| Eckhardt, Clara Mary.....        | 1441 12th St.          |
| Dayton, Ohio.                    |                        |
| Elden, Laeta.....                | 1034 Pine St.          |
| Boulder.                         |                        |
| Elder, Mary Esther.....          | Tolland                |
| Columbus, Ohio.                  |                        |
| Ellersick, Katherine.....        | 930 14th St.           |
| Comstock, Nebraska.              |                        |
| Feeney, Margaret M.....          | 1165 12th St.          |
| Chicago, Illinois.               |                        |
| Foster, Ward Harold.....         | 2113 Arapahoe Ave.     |
| Trinidad.                        |                        |
| Frankenberger, Bessie .....      | 1065 12th St.          |
| Dewey, Oklahoma.                 |                        |
| Fulton, John Hayes.....          | 1005 14th St.          |
| Pueblo.                          |                        |
| Gavin, William Edwin.....        | 1105 11th St.          |
| Indianapolis, Indiana.           |                        |
| George, Florence.....            | 1135 Pennsylvania Ave. |
| Weiser, Idaho.                   |                        |
| Giffin, Ruth.....                | 745 Mapleton Ave.      |
| Boulder.                         |                        |
| Giroux, Roy M.....               | 429 Highland Ave.      |
| Boulder.                         |                        |
| Goldsworthy, Zelma L.....        | Tolland                |
| Red Oak, Iowa.                   |                        |
| Goodykoontz, Colin Brummitt..... | 1027 10th St.          |
| Boulder.                         |                        |
| Grant, Elizabeth C.....          | Tolland                |
| Denver.                          |                        |
| Grigsby, Geneva .....            | 940 15th St.           |
| Blandinsville, Illinois.         |                        |
| Grigsby, Lura Belle.....         | 940 15th St.           |
| Blandinsville, Illinois.         |                        |

| NAME AND HOME RESIDENCE.                            | UNIVERSITY RESIDENCE.     |
|-----------------------------------------------------|---------------------------|
| Gutberlet, John Earl.....<br>Hardy, Nebraska.       | Tolland                   |
| Hall, Emma May.....<br>West Union, Iowa.            | 956 Marine St.            |
| Hall, Lillie Elma.....<br>Westmoreland, Kansas.     | 1408 Pine St.             |
| Harley, George Townsend.....<br>New York, New York. | 1205 13th St.             |
| Harrington, Helen .....                             | Tolland<br>Denver.        |
| Holaday, Horace A.....<br>Denver.                   | 1706 Athens St.           |
| Holman, Cora Lillian.....<br>Colorado Springs.      | 1209 Pennsylvania Ave.    |
| Holt, Charles Wilson.....<br>Naponee, Nebraska.     | University Place          |
| Hopkins, Florence May.....<br>Detroit, Michigan.    | 1131 University St.       |
| Hubbard, Mae Egerton.....<br>Boulder.               | 1216 20th St.             |
| Huestis, William Seaver.....<br>Denver.             | 1004 Pleasant St.         |
| Hutton, Meritt.....<br>Denver.                      | 1844 Athens St.           |
| Ingersoll, Warren Briggs.....<br>Boulder.           | 1408 Pearl St.            |
| Jackson, Emma Albertina.....<br>Red Oak, Iowa.      | 1044 University St.       |
| Johnson, Charles Parker.....<br>Brighton.           | 1706 Athens St.           |
| Johnson, Mary Ethel.....<br>Glidden, Iowa.          | 1153 Pleasant St.         |
| Joiner, Enfield.....<br>Talladega, Alabama.         | "The Seven Gables"        |
| Juckett, Ruson Earl.....<br>Sundance, Wyoming.      | 1145 13th St.             |
| Kelso, James Mitchell.....<br>Watonga, Oklahoma.    | 1305 17th St.             |
| Kendal, Claribel .....                              | 1325 Broadway<br>Boulder. |
| Kenahan, Katherine.....<br>Denver.                  | 1133 Pleasant St.         |
| Kluss, Mabel.....<br>Boulder.                       | 704 Concord St.           |

| NAME AND HOME RESIDENCE.         | UNIVERSITY RESIDENCE.                     |
|----------------------------------|-------------------------------------------|
| Knight, Natalie Emma.....        | 617 Mapleton Ave.<br>Boulder.             |
| Lacy, Louise Hannie.....         | 1040 11th St.<br>Rifle.                   |
| Laforgue, Paul Alain Louise..... | 720 Pine St.<br>Paris, France.            |
| Lamb, James Graham.....          | 1058 13th St.<br>Greeley.                 |
| Landrum, Mabel.....              | 1165 13th St.<br>Sterling.                |
| Layton, Maud.....                | Hawthorne<br>Paonia.                      |
| Leonard, Eleanor.....            | 1229 13th St.<br>Denver.                  |
| Leonard, Mary L.....             | 1133 Pleasant St.<br>Denver.              |
| Little, McGie Burtis.....        | University Place<br>Lexington, Missouri.  |
| Lovelace, Walter Sharp.....      | 1040 10th St.<br>Boulder.                 |
| Lowrey, Anna .....               | 1080 14th St.<br>Boulder.                 |
| MacDowell, Ruth .....            | 1643 Spruce St.<br>Nevada, Missouri.      |
| Martin, Alta .....               | 2330 13th St.<br>Boulder.                 |
| McBride, John Cumming.....       | City Y. M. C. A.<br>Denver.               |
| McCain, Kate .....               | 1155 13th St.<br>Carrollton, Mississippi. |
| McCarthy, Carolyn Yaeger.....    | 1091 14th St.<br>Alton, Illinois.         |
| McCarthy, Daniel Thaddeus.....   | 1140 10th St.<br>Red Lake, Minnesota.     |
| McKenzie, Pauline Griswold.....  | 809 Pine St.<br>Boulder.                  |
| Megowen, Sarah Emma.....         | 724 Spruce St.<br>Upper Alton, Illinois.  |
| Mickey, Alfred H.....            | 972 14th St.<br>Oswego, Kansas.           |
| Mitchell, Harry Thomas.....      | University Place<br>Rocky Ford.           |
| Moore, Evelyn Viola.....         | Tolland<br>Longmont.                      |

| NAME AND HOME RESIDENCE.                                  | UNIVERSITY RESIDENCE.       |
|-----------------------------------------------------------|-----------------------------|
| Morse, Mary .....<br>Denver.                              | Tolland                     |
| Nafe, Gertrude.....<br>Boulder.                           | 2124 17th St.               |
| Nafe, Robert Wallace.....<br>Boulder.                     | 2124 17th St.               |
| Nelson, Nellie.....<br>Howardville.                       | 913 Regent St.              |
| Nelson, Norris Hoag.....<br>Boulder.                      | 2315 12th St.               |
| Niehaus, Rosa Katharine.....<br>Cripple Creek.            | 2305 13th St.               |
| Nordby, Fred J.....<br>Boise, Idaho.                      | 1129 13th St.               |
| Oakley, Mary Eliza.....<br>Seattle, Washington.           | 1107 13th St.               |
| Owens, Jennie Marie.....<br>Bartlesville, Oklahoma.       | 915 9th St.                 |
| Pearce, Stella E.....<br>Cripple Creek.                   | 1100 Pennsylvania Ave.      |
| Person, Fred Gilman.....<br>Fort Collins.                 | North 2nd St. and 14th Ave. |
| Phillips, George Burton.....<br>Fruita.                   | 1121 University St.         |
| Pierce, Edna .....<br>Denver.                             | 1229 13th St.               |
| Pilcher, Georgia Elizabeth.....<br>Arkansas City, Kansas. | Chautauqua                  |
| Pilcher, Edith Blanche.....<br>Little River, Kansas.      | Chautauqua                  |
| Pines, John A.....<br>Boone, Iowa.                        | 2010 10th St.               |
| Poe, Charles Franklin.....<br>Ault.                       | 1706 Athens St.             |
| Pointer, William Joseph.....<br>Davis, Oklahoma.          | 633 Maxwell Ave.            |
| Price, Mrs. Charlie Johnston.....<br>McAlester, Oklahoma. | 920 10th St.                |
| Polk, Lillie Belle.....<br>St. Joseph, Missouri.          | 1405 12th St.               |
| Popplewell, Mary J.....<br>Fort Worth, Texas.             | 1509 Arapahoe Ave.          |
| Pryor, Hugh Clark.....<br>Spearfish, South Dakota.        | 1145 13th St.               |

| NAME AND HOME RESIDENCE.                               | UNIVERSITY RESIDENCE. |
|--------------------------------------------------------|-----------------------|
| Pulliam, Mary Corinne.....<br>Atchison, Kansas.        | 1165 12th St.         |
| Quarton, Harold B.....<br>Aspen.                       | 1135 11th St.         |
| Ragland, Ella Barrett.....<br>Paris, Texas.            | 1083 13th St.         |
| Rank, Raymond C.....<br>Boulder.                       | 1929 Walnut St.       |
| Rathvon, Nathaniel Peter.....<br>Boulder.              | 1333 Pine St.         |
| Renkes, Della Maude.....<br>Boulder.                   | 1313 University St.   |
| Richert, David Henry.....<br>Newton, Kansas.           | 1122 Pleasant St.     |
| Ritter, Carl Antony.....<br>Denver.                    | 1122 Pleasant St.     |
| Robbins, M. Clare.....<br>Manhattan, Kansas.           | 1408 Pine St.         |
| Robinson, Edna Elizabeth.....<br>Boulder.              | 1704 Pine St.         |
| Robinson, Jennie .....<br>Miami, Oklahoma.             | 1044 University St.   |
| Robison, Henry Wunderling.....<br>Carbondale.          | 1145 13th St.         |
| Rohwer, George Newton.....<br>Boulder.                 | 624 Pine St.          |
| Rymer, Dana Clyde.....<br>Spring Lake, Michigan.       | City Y. M. C. A.      |
| Salberg, Joseph Brunold.....<br>Boulder.               | North 19th St.        |
| Salter, Bernice Alma.....<br>Pueblo.                   | 1146 Pleasant St.     |
| Saltus, Charles .....<br>Springfield, Massachusetts.   | 1700 Spruce St.       |
| Seely, Marie Waterbury.....<br>Boulder.                | 1117 Pine St.         |
| Shisler, John William.....<br>Miami, Florida.          | University Place      |
| Shulters, Maude Alice.....<br>Sinclairville, New York. | 1040 11th St.         |
| Shultis, Frank Wesley.....<br>Canon City.              | City Y. M. C. A.      |
| Smith, Alfred Hershey.....<br>Longmont.                | 1155 13th St.         |

| NAME AND HOME RESIDENCE.                             | UNIVERSITY RESIDENCE. |
|------------------------------------------------------|-----------------------|
| Smith, Gretchen.....<br>Pocatello, Idaho.            | 2211 6th St.          |
| Smith, Osmer Elliott.....<br>Boulder.                | 1024 University St.   |
| Spaulding, Helen B.....<br>Denver.                   | 1325 Broadway         |
| Spaulding, Maude Iva.....<br>Boulder.                | 1125 Pleasant St.     |
| Spencer, Carrie M.....<br>Colorado City.             | 1620 Walnut St.       |
| Spring, Herbert Arthur.....<br>Boulder.              | 537 Pine St.          |
| Spring, Isadore.....<br>Boulder.                     | 537 Pine St.          |
| Staub, Walter J.....<br>Thompson, North Dakota.      | Tolland               |
| Stoddard, William Smith.....<br>Erie.                | 1127 12th St.         |
| Strever, Arthur Edwin.....<br>Boulder.               | 2637 North 5th St.    |
| Swayne, Ida Loyd.....<br>Fort Worth, Texas.          | 1149 12th St.         |
| Tackett, Evans McGarvey.....<br>Sabinal, Texas.      | City Y. M. C. A.      |
| Tandy, M. Frances.....<br>Carbondale.                | 1567 9th St.          |
| Tatum, Arthur L.....<br>Boulder.                     | 1710 Grove St.        |
| Taub, Bertha Albertina.....<br>Denver.               | 1121 13th St.         |
| Swaggart, Luman Birde.....<br>Eldora, Iowa.          | 1122 Portland Place   |
| Taylor, Ethel.....<br>Oregon, Missouri.              | 636 Marine St.        |
| Thompson, Lloyd G.....<br>Grand Island, Nebraska.    | 1153 Pleasant St.     |
| Thompson, Muriel Elizabeth.....<br>Cimarron, Kansas. | 1014 Mapleton Ave.    |
| Thornton, Hattie May.....<br>Chicago, Illinois.      | 1325 Broadway         |
| Thornton, Pearl Esther.....<br>Chicago, Illinois.    | 1325 Broadway         |
| Todd, Mary Louise.....<br>Boulder.                   | 947 University St.    |



| NAME AND HOME RESIDENCE.     | UNIVERSITY RESIDENCE.                          |
|------------------------------|------------------------------------------------|
| Tull, Elvon Lee.....         | 29th and Walnut Sts.<br>Boulder.               |
| Tyvand, Henry Albert.....    | City Y. M. C. A.<br>Mount Horeb, Wisconsin.    |
| Unsold, George Peterkin..... | 1119 Broadway<br>Shepherdstown, West Virginia. |
| Van Hoose, Grant.....        | 1045 14th St.<br>Ordway.                       |
| Van Metre, Harold.....       | 1085 13th St.<br>Tipton, Iowa.                 |
| Wade, Willard Marshall.....  | University Place<br>Kearney, Nebraska.         |
| Walker, Golda.....           | 1091 14th St.<br>Worden, Illinois.             |
| Webb, Helen Manker.....      | 1608 6th St.<br>Boulder.                       |
| Wells, Jessie Lander.....    | 1135 Pennsylvania Ave.<br>Glass, Tennessee.    |
| White, Mabel Asena.....      | 1125 Pleasant St.<br>St. Joseph, Missouri.     |
| Wilkinson, Carl Isaac.....   | 1024 University St.<br>Riverside, California.  |
| Winter, Myrtle May.....      | University Place<br>Council Bluffs, Iowa.      |
| Wood, Emily Bingham.....     | 1421 12th St.<br>Omaha, Nebraska.              |
| Worsley, Christian A.....    | City Y. M. C. A.<br>Thornton, Rhode Island.    |

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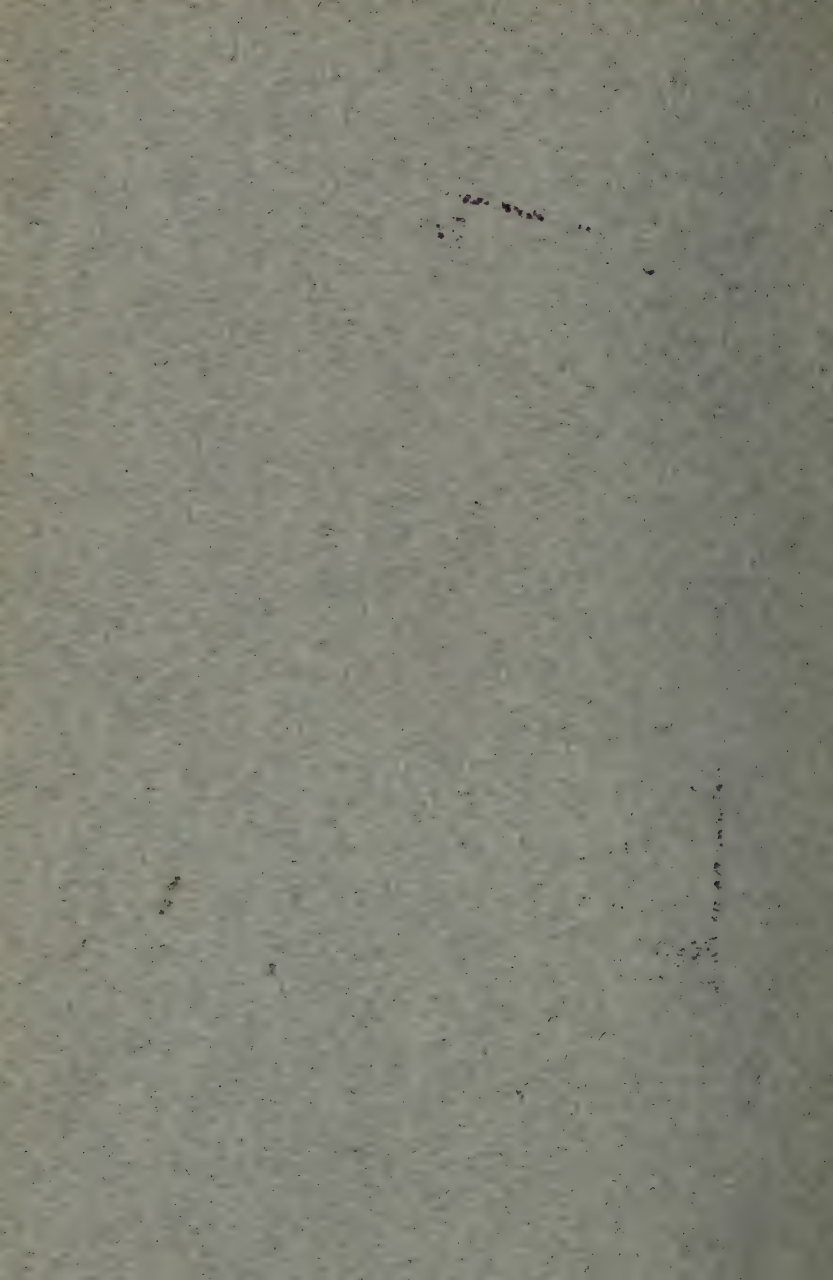
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